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To develop an evaluation model appropriate to education in the Philadelphia School System, six teams of evaluators drawn from a total evaluation staff of 11 report on 34 Title I-ESEA projects processed in the city of Philadelphia during the 1968-69 school year. Information in each report includes a summary of the particular project, its problem focus, a literature review, the project's objectives, and its procedures. Titles of projects reported include: Instructional material centers, learning centers, improving reading skills, salable vocational skills, closed circuit television, school community coordinator, kindergarten aides, creative dramatics, counselor aides, art specialist teachers, class for 3-year-old deaf children, parent school aides, English as a second language, Head Start follow through, and Afro-American history. (JK)

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EVALUATION DESIGNS FOR TITLE I
OF THE ELEMENTARY AND SECONDARY
EDUCATION ACT FOR 1968 - 1969

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THE SCHOOL DISTRICT OF PHILADELPHIA
Office of Research and Evaluation

John L. Hayman, Jr.
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A-X

INTRODUCTION

In September of 1968 an evaluation team was assembled to conduct evaluations of Title I, ESEA, projects for the School District of Philadelphia. Dr. John L. Hayman and his staff had spent the previous year recruiting the fourteen professional members. The secretarial staff was selected during September and October, 1968. The designs for evaluation of thirty-five of the projects included in this document represent an initial attempt to explore what evaluation has to add to an important program such as Title I.

Although the four evaluation teams and other individual project evaluators are credited with project evaluation designs, two other members of this staff have materially contributed to each of the project evaluation designs. Mr. James Ayres, Test Construction Specialist, has provided untold hours of consultation and direct assistance in selection, development and processing of tests and other evaluation instruments. Dr. Ying Chuang, Design and Analysis Specialist, has given research design consultation to all project evaluators. He has also made a major contribution to the design of an evaluation model which will be published soon in a separate document. A brief description is included below in order to provide a synthesis of what might be regarded on the surface as thirty-five separate designs.

Before discussing the model for evaluation, it is appropriate to give credit for this document to the four secretaries who have worked diligently to bring the typed copy through several stages of revision. Mrs. Darliene Christie, Miss Linda Brown, Mrs. Esther Greenberg and Miss Carol Desandro have our warmest thanks for their very dedicated efforts

A Model For Evaluation

A. Statement of the Problem

The conceptual base underlining educational evaluation needs to be stated at the onset. Conceptualizations used here may be divided into two classes: 1. Conceptions of the nature of evaluation; in general, and as related to specific classes of educational programs; and, 2. Conceptions of a model of evaluation systems needed to conduct educational evaluations.

Although industrial and military organizations have developed appropriate system models for evaluating success around tangible products, there are few adequate conceptualizations of decision-making processes and their associated information requirements in education. At present, there are at least two approaches to evaluation in education; namely, formative and summative evaluation. Formative evaluation serves individual project administrators and summative evaluation provides comparative information about projects for central administration decisions.

The major aim of this paper is to develop an evaluation model that is appropriate to education in the Philadelphia School System. A word of caution is in order. When one borrows techniques such as systems evaluation from other disciplines, he must be sure that those techniques are applicable to the problems under consideration. Acknowledging potential shortcomings in a totally mechanistic model, the adaptation recommended here is one which accounts for the specific environment of urban education.

B. Evaluation Defined

Evaluation means the provision of information through formal means, such as experimental research and survey research and the use of judgmental analyses to supply rational bases for making judgements which are inherent in decision situations. Several levels of decision-making are constantly in process where educational projects operate. Each requires a different kind of information. Two levels of decision are most crucial for probable success of a project. At the central administration level, information must be provided which will permit enlightened funding decisions. At the project operational level, information is required which will help field administrators achieve or alter stated goals and purposes. The evaluation effort should develop information appropriate to each level.

C. Nature of Evaluation

In the evaluation of educational programs containing many varied projects aimed at a comprehensive approach to major problems in education, there are at least two major kinds of evaluation proposed in related literature. These two evaluation activities lend themselves to different purposes.

1. Individual Project Evaluation (Formative Evaluation).

As projects develop, their administrators require help in defining behavioral objectives and in measuring those objectives. The evaluators provide conceptual and technical services within projects at this stage.

Also, when projects are clearly formulated and functioning, project administrators require further evidence of uniformity and disparity of operations within treatments. Evaluators here act as a feedback system in designing and in evaluating process instruments.

2. It is always desirable from the central administration vantage to know which projects are likely to provide the most benefit for dollars expended. This summative evaluation has three major comparative aspects. They are (a) input evaluation, (b) process evaluation, and (c) output evaluation.

(a) Input Evaluation

In conducting an input evaluation, an attempt was made to determine the relevance of the project to the needs of the students, staff, community, and the innovation in the School District of Philadelphia.

This was done by drawing information about the needs of the School District of Philadelphia from our pupil contacts with all levels of school personnel and by reviewing data in many of the records of school personnel by the Federal Evaluation staff. From this a summative input judgemental model was developed and used to assess 35 individual projects.

(b) Process Evaluation

The purpose of process evaluation is to monitor the project to learn what was done and to provide information to the project manager and his staff so that they may improve project quality while it is being conducted.

The process evaluation will be done by employing an instrument of our own design. It is in the general form of a check list allowing the evaluator to tabulate certain critical aspects of the projects' performance.

(c) Output Evaluation

Output evaluation looks for changes in attitude and/or behavior in four areas: 1) students, 2) staff 3) community, 4) innovation.

The output evaluation will generally consist of pre and post tests. These two tests will be related by a statistical design. The data gathered in the pre and post test will come from questionnaires, surveys, interaction analyses, test, etc.

One of the potential difficulties in providing information for two levels of decision simultaneously is that of maintaining objectivity. To date, the excellent cooperation achieved in providing the two kinds of information has been possible as a direct result of broad commitment in the School District of Philadelphia to educational improvement.

The singular distinguishing feature of an ongoing evaluation effort is that it develops within itself a mechanism for change. No doubt, by the time final reports are completed there will be many alterations to account for changes that have occurred. In another year, the model used here will undergo several revisions. This document is, therefore, to be taken as a cross section of an evaluation effort in a developmental process.

John B. Peper

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I N S T R U C T I O N A L M A T E R I A L S
C E N T E R S

Director: Lillian Batchelor

Evaluator: Stephen Davidoff

Assistant: Barry Clemson

SUMMARY

The literature supports the notion that individual children learn in different ways, and certain characteristics of the child must be considered in designating the most desirable instructional experiences for him.

The Instructional Materials Center is a resource facility containing books, audio-visual instructional materials, and the devices required to utilize them. The rich diversity of print and non-print materials make the IMC more than just a traditional library. The facility should be utilized for enriching classroom instructional units and making provisions for individual differences.

The primary objectives in the past were:

1. To build centers or modify existing facilities (1966-67).
2. To stock IMC with hardware and software (1966-67).
3. To increase the utilization of the IMC (1967-68).

The comprehensive utilization of IMC will continue to be a primary objective in 1968-69, but in addition to this, assessments will be made to determine the impact of the IMC upon the student.

In order to evaluate the impact upon students, the following areas will be examined:

1. Utilization of IMC for instructional purposes by the classroom teacher.
2. Materials used by the teacher to supplement the classroom program.
3. Student use of IMC materials for individual pursuits and interests other than those directly related to formal classroom assignments.

Questionnaires, observational logs and interviews will be used in conjunction with standardized test scores to assess the degree to which objectives are met.

PROBLEM

Libraries, as a depository of information, have long been revered as a potential tool in the learning process. The IMC goes beyond the traditional library since it contains materials for viewing and listening as well as reading. It is assumed that the best instruction occurs when

the pupil is brought into contact with important ideas and experiences in such a way that learning results and that the student will continue to seek further learning on his own initiative.

In the past, books were the unitary means by which ideas were recorded and communicated. Today, new devices are available to offer unique contributions to the same goal.

Before the IMC can be used optimally, a number of questions remain to be answered. Among these are:

.What materials and services should the IMC provide for the student?

For the teacher?

.What reference skills should the students have in order to maximize learning?

REVIEW OF LITERATURE

A substantial body of research indicates that children may approach learning tasks in different ways, and that the most effective instruction will take into account the individual child's characteristics in this regard. Concepts such as learning strategies, sets, levels, and learning modes have been prominent in recent literature with respect to individual differences in learning.

Learning Strategies, Sets, and Levels. The concept of a learning strategy is not new. Dewey's fundamental theory of "learning by doing" fits this paradigm. Furthermore, the observing responses defined by Wyckoff (1952), which involve controlling response patterns by manipulating the learner's environment, are also related. In fact, most of the current methods for "learning-how-to-learn" are predicated partly on the structure of learning strategies (Klausmeir, p. 464).

Gagne and Paradise (1961) and Gibson (1965) have written of learning strategies and have indicated that the strategies which the student brings to the learning situation may be more crucial in determining educational outcomes than the variables more often treated experimentally. The learning strategy concept includes such things as method of conceptualization and of problem solving; reaction to homework, to flexible and rigid programs, and to different teaching procedures; and performance under different conditions of grouping and class size (Anderson, 1961). The vast resources of the IMC may aid in concept formation and provide greater flexibility for instructional programs. Utilization of the IMC allows for a multiplicity of activities within a class and varying group size according to instructional task.

Harlow (1949) formulated the notion of a "learning set." He defined a learning set in terms of knowledge relevant to the learning of

a distinct task or a distinct class of tasks. It has been defined in a slightly different way as readiness to learn and knowledge of how to learn (Bloom, Davis, and Hess, 1965).

Bloom, Davis and Hess (1965) have devoted considerable attention to learning set in their recent work and have commented as follows:

Learning to learn is a far more basic type of learning than coaching the child on school learning. It includes motivating the child to find pleasure in learning. It involves developing the child's ability to attend to others and engage in purposive action. It includes training the child to delay the gratification of his desires and wishes and to work for rewards and goals which are more distant. It includes developing the child's view of adults as sources of information and ideas, and also as sources of approval and reward (p. 15).

Learning level refers to level of task which an individual child is capable of successfully completing. This concept relates to the developmental stages which have been discussed by Piaget and others. Different types of learning or learning tasks may be appropriate for children exhibiting different learning levels. Studies by Luchins (1961) and Gagne (1965) distinguished among types of learning differing in complexity from simple signal learning, i.e., Pavlovian conditioning, to principal learning and problem solving.

Learning Abilities. Students differ, of course, in learning abilities. Stake (1960) and Duncanson (1963) found that task-oriented studies were useful in identifying those learning abilities which significantly affected the successful completion of a trial. The abilities they described are consistent with those a learner brings to all learning situations -- basic, abilities, relevant knowledge, and prior learning experiences.

The abilities identified by Stake and Duncanson are identical to the intellectual abilities proposed by Bloom (1956). Bloom indicated that different abilities are appropriate for different tasks. He stated, for example, ". . . if we are concerned with the problem of transfer of training, by definition we would select intellectual abilities and skills as having the greatest transfer value (p. 42)." Guilford's (1965) factor analytic studies also identified and reported the importance of these abilities in predicting achievement.

Sensory Mode. Another approach to the problem of learning which has shown promise is that developed by Fernald (1921) and used recently more specifically for perceptually handicapped children by Frosting, Lefener, and Whittlesey (1961). This approach focuses on the sensory mode which is favored by a child as he learns. These studies have shown that most children learn by using any of the sensory modes, but some children learn best when presented with visual stimuli, others with oral stimuli, while others need to feel and manipulate the stimuli before they can comprehend fully.

These concerns were also stressed by Snow (1963) in terms of "media literacy." He stated that materials should be developed which are specifically designed to organize the knowledge presented by this media.

In the final analysis, researchers and curriculum designers must take the initiative in formulating and utilizing media so that they meet the needs of the individual child. Suppes (1964) concurs, ". . . technology alone cannot produce any fundamental or long-lasting changes in the curriculum. Only if its applications are guided by appropriate psychological principles and subject-matter insight will such (constructive) changes be brought about (p. 79)."

Summary. The literature dealing with the relationship between the individual and how he learns is extensive. That which is relevant for the current project may be summarized as follows:

.Three closely related but conceptually distinguishable learning variables are learning strategy, learning set, and learning level. Children bring different levels of these variables to a given situation and thus present varying instructional needs.

.In addition children have different learning abilities, that is, they differ in basic abilities, relevant knowledge, and prior learning experiences.

.Children also differ according to the sensory mode which they use most effectively in learning. Some learn best with visual stimuli, others learn best with oral stimuli, while others need tactual stimulation.

.A child will learn most effectively when the classroom experiences he receives are designed around his particular characteristics. In other words, the most effective instruction will be that which is manipulated to fit the child, rather than the other way around.

The multimedia available in the IMC make enrichment of basic classroom instructional units and the individualizing of instruction a possibility for increased learning. Furthermore, the IMC may offer children the opportunity to pursue their own interests and special projects which could extend and enrich impoverished cultural backgrounds.

OBJECTIVES

A. To provide students with resource materials which supplement classroom instruction as evidenced by:

- (1) increased student use of books and printed materials
- (2) teacher utilization of instructional materials for planning purposes
- (3) improved student performance in basic skills

These objectives will be measured by an observation log, teacher questionnaire and the Iowa Test respectively.

B. To provide instruction in reference skills and in locating information thereby improving student performance as measured by Philadelphia City Tests.

C. To develop positive feeling towards using the IMC facilities as measured by a student questionnaire.

D. To provide materials and services for pursuits and interests (e.g., hobbies, recreational reading) - not directly related to classroom instruction.

Experimental Design One

This phase of the evaluation will be conducted using the National Study of Secondary School Evaluation Form for IMC's (see attached instrument). Periodic visits to centers and the filling in of check-lists will lead to a fairly objective rating.

The ratings for the several centers will be compared prior to May, 1969.

In addition, circulation figures will be available in fall, and spring to assess student usage. These devices should indicate a measure of use.

Evaluation Design 1.b.

This will be a pre and post questionnaire (see attached prototype) designed to obtain information on teacher use and teacher perception of IMC. Contained are items designed to assess if IMC is providing service to teachers in areas required by teachers for enrichment of classroom program.

Hypotheses

- H₁: There will be significant increases in teacher use of IMC from beginning till end of year as measured by the teacher questionnaire.
- H₂: There will be significant improvements in the IMC operations as perceived by the teachers throughout the year as measured by the teacher questionnaire

STATISTICAL TESTS

1. To test H_1 , the first two items of the questionnaire will be analyzed to see if there is a significant change in the proportion of teachers selecting a given response (.05 level).

2. To test H_2 , items three through ten will be analyzed to see if there has been a significant change in the proportion of teacher's responses between pre and post questionnaires.

Model

| ITEM SELECTION | |
|----------------|------------------------------|
| | A + B C + D |
| Pre | |
| Post | |

$$Z = \frac{b - c}{\sqrt{b + c}}$$

(see Guilford p. 186-188)

In addition to the above, an inter-correlation of items may be run to determine if there is a relationship between teacher use and service provided by IMC.

Evaluation Design 1.c.

What impact does IMC have on student performance in basic skills?

Statistical Hypotheses:

H_0 : There will be no significant ($p < .05$) difference on the Iowa Test of Basic Skills (composit) between classes who frequently or infrequently attend IMC's.

To test the overall statistical hypotheses a multiple classification ANOVA will be used as follows:

ANOVA

(Grades 4, 5, 6)

STUDENT GAIN

| Class Attendance | Low | Average | High | |
|------------------|---------|-----------|-------------|-------|
| Per Month | | | | |
| 0 - 2 | I O W A | G A I N | S C O R E S | V_1 |
| 3 - 5 | I N | B A S I C | S K I L L S | V_2 |
| 6 - 8 | | | | V_3 |
| 9 or more | | | | V_4 |
| | U_1 | U_2 | U_3 | |

Sample for design 1.c.

GRADE 4, 5, 6

| DISTRICT | SCHOOL | LOCATION | LIBRARY SUPERVISOR |
|----------|------------------------------------|--|--------------------|
| 1 | Powell Lea McMichael | 36th and Powelton 47th and Locust 36th and Fairmount | Sylvia Marder |
| 2 | Landreth McDaniel F. Douglas | 23rd and Federal 21st and Moore 22nd and Norris | Harold Jones |
| 3 | Taggert Kearney | 4th and Porter 6th and Fairmount | Eleanore Serinsky |
| 5 | Elverson | 13th and Susquehanna | Gloria Roseman |
| 6 | Fitler | Seymore and Knox | Judy Marcus |
| 7 | Webster | Hedge and Unity | Lea Pinson |

MONTHLY IMC ATTENDANCE FORM

Directions: The purpose of this form is to improve the services of the IMC. Please fill out monthly as follows: (1) List information required in items 1 through 4. (2) List the teacher's name, grade taught, each visit, average time of stay and purpose of visit. If the visits were related to a class project they should be counted as academic. If they were used for free-reading, hobbies, etc., they should be categorized as non-academic. It is realized that there is a fine line between the categories -- but the distinction can be made by answering the following: "Was the purpose of the visit directly related to a classroom instructional unit?"

1. School _____

4. Date: From To

2. Location _____

3. Principal _____

PLEASE PRINT

| Teacher (Full Name) | GRADE | DATE OF VISIT | AVERAGE TIME PER VISIT | PURPOSE OF VISIT | |
|------------------------|-------|------------------|---------------------------|------------------|--------------|
| | | | | ACADEMIC | NON-ACADEMIC |
| | | | | | |

Evaluation Design 2.

What role should the Library fulfill in IMC operations?

Statistical Hypothesis.

There is no significant ($p < .05$) difference on Iowa Subtest of Reference Skills among students who receive instruction from interns and students whose schools do not have library interns.

ANOVA

(Grade 5 and 6)

ROLE OF INTERN

| <u>Schools with interns</u> | <u>Schools without interns</u> |
|--|--------------------------------|
| Scores on Iowa Subtest - Knowledge & Use of Reference Skills | |

Cell data would include individual gain scores on the Reference Skills Subtest at the Iowa.

Instruments to be used.

- 1) Iowa Test of Basic Skills

TEACHER QUESTIONNAIRE

TITLE I EVALUATION

Library - Instructional Material Center

The following questionnaire is designed to gain information that will help improve the services offered by the IMC. Through your cooperation, needed information may be obtained. Please take a few moments from your schedule and fill in the required information. As in all research, individual replies will be confidential.

DIRECTIONS: 1. USE A NO. 2 PENCIL.

2. Fill in your Name; Form of Test (A); Semester (Fall); Grade; in the Boxes provided. Then blacken the letter box below which matches each letter of your name, etc. It will not be necessary to fill in any information other than what is called for in this direction and direction #3.
3. Print your school's name in the space provided.
4. Select only one response for each question.
5. DO NOT USE SPACE E on the Answer Sheet.
6. Return the Questionnaire and Answer Sheet in a sealed envelope to your building Principal.

1. How many times per month do you take your class to the Library - IMC?

- | | |
|-----------|--------------|
| A. 0 | C. 3 or 4 |
| B. 1 or 2 | D. 5 or more |

2. About how long will each visit last?

- | | |
|-------------------------|-------------------------|
| A. Less than 15 minutes | C. 31 to 45 minutes |
| B. 16 to 30 minutes | D. More than 45 minutes |

3. How familiar are you with the contents of the IMC?

- | | |
|------------------------|------------------------|
| A. Very familiar | C. Slightly familiar |
| B. Moderately familiar | D. Not at all familiar |

In the next series of questions (#4 to #10) you are asked to select the response which best describes your school's IMC and the staff who are responsible for servicing it. Select:

- A Infrequent
- B Occasionally
- C Frequently
- D Very frequently

THOSE IN CHARGE OF THE IMC IN MY SCHOOL:

4. Inform me when new equipment and materials come in.
 - A. Infrequent
 - B. Occasionally
 - C. Frequent
 - D. Very frequent
5. Assist me in selecting materials and A.V. aids for the classroom
 - A. Infrequent
 - B. Occasionally
 - C. Frequent
 - D. Very frequent
6. Inform me of areas of pupil interest they have observed
 - A. Infrequent
 - B. Occasionally
 - C. Frequent
 - D. Very frequent
7. Help me develop reading lists for special units
 - A. Infrequent
 - B. Occasionally
 - C. Frequent
 - D. Very frequent
8. Provide ideas and materials for bulletin boards
 - A. Infrequent
 - B. Occasionally
 - C. Frequent
 - D. Very frequent
9. Provide facilities and assistants in the production of instructional materials
 - A. Infrequent
 - B. Occasionally
 - C. Frequent
 - D. Very frequent

10. Train and schedule projectionists for A. V. equipment

A. Infrequent

C. Frequent

B. Occasionally

D. Very frequent

11. The source of instructional materials that I draw most frequently upon for classroom instruction is:

A. Public and University libraries

B. Ideas from other teachers and professional publications

C. University method courses

D. Instructional Material Center

Questions 12-15 Lists statements concerning the IMC. Select the one response for each statement which best describes your feelings about the statement.

12. I would prefer to take my class to the IMC more frequently

A. Strongly agree

C. Moderately disagree

B. Moderately agree

D. Strongly disagree

13. I can send an individual or committees to work in the IMC as often as I wish.

A. Strongly agree

C. Moderately disagree

B. Moderately agree

D. Strongly disagree

14. The IMC is NOT available for student use prior to 9 a.m., during lunch, and after school.

A. Strongly agree

C. Moderately disagree

B. Moderately agree

D. Strongly disagree

15. I have difficulty in obtaining audio-visual devices (e.g., slide projector, charts, etc.) from the IMC for classroom use.

A. Strongly agree

C. Moderately disagree

B. Moderately agree

D. Strongly disagree

Questions 16-30-asks you to rate aspects of the IMC on a Scale from excellent to poor.

16. How adequate is the number of instructional materials personnel to meet your needs?

| | |
|--------------|---------|
| A. Excellent | C. Fair |
| B. Good | D. Poor |
17. How adequately do members of the instructional materials staff aid teachers in the effective use of instructional materials and equipment?

| | |
|--------------|---------|
| A. Excellent | C. Fair |
| B. Good | D. Poor |
18. To what extent do members of the IMC Staff help you in the production of appropriate instructional materials?

| | |
|--------------|---------|
| A. Excellent | C. Fair |
| B. Good | D. Poor |
19. To what extent do members of the IMC Staff help students make effective use of instructional materials?

| | |
|--------------|---------|
| A. Excellent | C. Fair |
| B. Good | D. Poor |
20. As a resource center to be used for leisure activities the students consider the IMC to be

| | |
|--------------|---------|
| A. Excellent | C. Fair |
| B. Good | D. Poor |
21. To what extent does the IMC Staff involve teachers in the selection of materials?

| | |
|--------------|---------|
| A. Excellent | C. Fair |
| B. Good | D. Poor |
22. How adequately are books organized for effective use?

| | |
|--------------|---------|
| A. Excellent | C. Fair |
| B. Good | D. Poor |

23. How adequately are periodicals, pamphlets and similar materials organized for effective use?

A. Excellent

C. Fair

B. Good

D. Poor

24. How adequately are the audio-visual materials organized for effective use?

A. Excellent

C. Fair

B. Good

D. Poor

25. How accurate and up to date are the card catalogue and shelf-list files?

A. Excellent

C. Fair

B. Good

D. Poor

26. How accessible are instructional materials?

A. Excellent

C. Fair

B. Good

D. Poor

27. How adequate are the periodicals to meet student needs and interests?

A. Excellent

C. Fair

B. Good

D. Poor

28. How adequate are the periodicals to meet student needs and interests?

A. Excellent

C. Fair

B. Good

D. Poor

29. How adequate are the periodicals to meet faculty needs?

A. Excellent

C. Fair

B. Good

D. Poor

30. How good is the condition of audio-visual equipment?

A. Excellent

C. Fair

B. Good

D. Poor

LEARNING CENTERS

Director: Lore Rasmussen

Evaluator: Barry Clemson

SUMMARY

The Learning Centers Project is an attempt to develop and to demonstrate new and different models of teaching and teacher behavior. The project hopes that these models will have an impact upon the children in the program, upon the school climate and teacher behavior in the Learning Center Schools, and upon the continuing dialogue regarding feasible and desirable educational practices.

The evaluation for this year has two major goals. The first is to explore those issues which seem most relevant to the decision-making needs of School Board administrators (i.e. the role of the Learning Centers as an agent of innovation). The second is to develop a comprehensive, longitudinal study design for succeeding years.

PROBLEM

Discussion of the degree of student "failure" in school is exceedingly difficult. Not even diplomas can be taken at face value as measures of achievement because there are significant numbers of high school graduates who read at sixth or even fourth grade level. Standardized achievement tests offer perhaps the most objective evidence of student achievement, but even here some recent work indicates that, at least among some groups, the incentives which suffice to motivate middle-class youth to great effort are not adequate; thus, the tests might not really tap these students' knowledge. In other areas, such as imagination, creativity, or aesthetic appreciation, data is even less adequate. In the areas of personality development (i.e. self-image or self-confidence) the researcher is lost in a welter of speculations.

Fortunately, there are some minimum points that most observers agree upon. Far too many students fail to achieve even basic literacy; they are unable to speak, write, or read effectively. Far too many students drop out before finishing high school. Relatively few schools or classrooms encourage the development of facilities other than rote memorization (e.g. reasoning ability, imagination, intuition, creativity). Far too few schools even attempt to deal with students' negative self-image or lack of integrity or limited self-confidence. The point is not that the schools can somehow "solve" all of these problems. Rather, the point is that the schools are not doing all that we might reasonably expect them to do to help develop the intellectual and personality traits and abilities that are needed in our complex, modern world. Another point that needs to be made is that everything said so far applies even more strongly to the inner city schools.

Many educators would like to see the schools doing a more effective job with a greater percentage of students. However, discussions of remedies or improvement take for granted aspects of the classroom that haven't changed in hundreds of years. That is, the teacher does most of

the talking and deciding: the curriculum is divided into subjects like English, mathematics, and history; the student is expected to function in terms of a middle-class set of (largely deferred) rewards. It is not that these aspects of the classroom are to be condemned, but one wonders if they should be accepted as "givens" in discussing models of education merely because we are not aware of any other possibilities.

The inner city schools suffer from a great many ills, some of them a result of an overall scarcity of money, materials and competent personnel. Other of the difficulties in ghetto schools may well be the result of organizational defects. Lack of flexibility, centralized control and the concomitant lack of community participation, too little or inadequate training of personnel which results in marked insensitivity to the values, mores, and special problems of a particular area, inappropriate materials, and outright racism might all be cited as examples of defects in organizational functioning.

The problem is to provide a model of an organization engaged in educating children which overcomes some of the organizational defects found in a school district. In particular, the organization must be flexible, responsive and creative. The Learning Centers Project attempts to provide supportive services and relationships while simultaneously allowing decentralization in decision-making. The Learning Center project director seems to be conscious of the fact that an organization can control the variety of a rapidly changing environment only by providing at every point decision-making capabilities to match the environment's variety.

Teachers venture into inner city schools facing a stacked deck in many respects. The students' culture and mores are quite different from the teacher's own, and, even worse, equally different from those which the teacher has been trained to deal with (Gordon). The experiences and abilities that the students bring to school are equally foreign to the new teacher. The teacher is faced with a group of students who, by his standards lack the information they should, can't do those things which they should be able to, and in general, don't behave as the teacher feels they ought to. In addition to all of the foregoing, the teacher probably feels (at least unconsciously) that his value system is superior to that of the student. Therefore, it is not too surprising to find ghetto schools emphasizing discipline, expecting very little of their students, and graduating many semi-literates.

The problem is to provide a model of teacher behavior which cuts through the undesirable results of the cultural shock experienced by many teachers when placed in the ghetto. In particular, the Learning Centers Project wants to provide a model of teacher behavior that will be supportive for the students, indirect, non-punitive, and that will hopefully lead to the student having an improved attitude about himself and toward learning.

Middle class children have many experiences that are lacking or minimal for ghetto children. A number of observers (Reisman, 1964; Napier, 1967) feel that the most important experiences for youngsters are verbal interaction with adults and peers, and manipulation of many different kinds

of physical objects. These are precisely the types of experiences that ghetto children lack.

In addition, both the traditional subject matter and the system of rewards and penalties are quite unreal to the ghetto child. The problem is to meet the ghetto child "where he's at" in terms of interest, ability and emotional development. Specifically, this means developing a curriculum that is relevant to the life-style of the ghetto child, and that is appropriate to his stage of development.

Summary. The basic assumption of the Learning Centers Project is that it is both necessary and possible to develop new and different models of teacher behavior, teacher methods, and curriculum that can then contribute to the ongoing dialogue regarding the meaning of "education" for children. A sub-assumption is that teachers who like and trust children, working in a laboratory environment with a multitude of interesting materials, can make learning relevant and exciting for children. Another sub-assumption is that these methods are well suited to developing most aspects of intellectual abilities and emotional maturity in the child.

The underlying philosophy of the project could be grossly characterized by identifying it with the works of Piaget, Baldwin, Isaacs, Luria, Bruner and the Educational Development Corporation.

REVIEW OF LITERATURE

Marceine Mattleman (1966) and Dr. Rodney Napier (1967) have both conducted extensive studies of the Learning Centers Project. Both investigated student achievement and both had primarily negative results. Mattleman found some indication of improvement in reading and a significant change in verbal language facility among the experimental group as compared to the control group. She found no significant gain in measured intelligence nor in arithmetic achievement.

Dr. Napier investigated the Learning Center's impact upon teacher behavior, parent attitudes toward school, student attitudes toward school and self, and student achievement. The major techniques used were an interview schedule, mailed questionnaires, interaction analysis observations, projective techniques for students to react to, and the standardized city wide tests. Student dimensions showed very little change. The first grade experimental group did change significantly in percentile ranking from the Metropolitan Reading Readiness Test to the Stanford Achievement Test (given one year apart).

Teacher behaviors showed the greatest change in Napier's study. Those teachers who participated in the Learning Center's in-service program showed much greater increase in the proportion of indirect behavior, frequency of high level questions, and praising and motivating behaviors than did the control groups. Further, "as a group, the laboratory teachers appeared to rate the following, consistently higher than the control or in-service teacher:

- a. showed preference for working with lower class children.
- b. perceived the administration as friendly.
- c. saw themselves as more child centered.
- d. appeared more optimistic about the advantages to be gained from special school projects.
- e. seemed more hopeful at the possibility of upgrading student achievement, moral standards and levels of aspiration.

(Napier, p. 35)

In August 1963, the Central Advisory Council for Education (England) were asked by Sir Edward Boyle, Minister of Education, to consider the whole subject of primary education (Plowden, 1966). According to their description, roughly one third of the British elementary schools are operated in a manner that is very similar to the Learning Centers Projects. The activities, the materials and apparatus, and the functions of the teacher are all quite similar in the two settings.

The results of this massive evaluation have relevance for evaluating the Learning Centers. The children in the modern English schools scored slightly lower than did the children in traditional schools on standard achievement tests. Despite this unfavorable finding, the Council felt that other factors outweighed it, and that overall the modern schools were much better. The factors in which the modern schools surpassed the traditional ones include emotional development, liking for and interest in school work, purposefulness and self-discipline in the children, and ability to do independent work. Further, the modern schools are much more able to take into account and to prescribe for individual learning problems. This last factor alone may account for the fact that there are relatively few problem readers or mathematical illiterates in these schools.

The Plowden Report does not speak directly to the questions of whether or not the Learning Centers approach is better than some other approach for ghetto children. The study is set in another country; it deals with aggregates that do not distinguish between ghetto and non-ghetto children, and the investigators did not use objective measuring instruments for many of the non-achievement factors (e.g. affective variables, creativity, etc.). The Plowden Report is provocative in the present context because it has documented the fact that the Learning Centers approach can work successfully on a large scale.

Last year's evaluation of the Learning Centers by the Franklin Institute produced several interesting results. A major finding was that the entire teaching staff at Learning Center schools, as measured by the pre and post MACI interaction analysis observations, became significantly more indirect, less punitive, and elicited more high level student contributions. From the principal's point of view, the Learning Center was expected to have its most important effect upon language and speech development. At the end of the year, these same principals unanimously felt that

the most important benefit was in improved pupil motivation, attitude, and social competence. All principals believed that the Learning Centers favorably influenced the classroom dynamics and the individualization of instruction in their schools.

"Clearly there is strong evidence to support the conclusion that the Learning Centers project exerts a strong affect on the classroom dynamics in its environment in precisely those areas it wishes to change. This objective conclusion is fully supported by on-site interview and observation; students are so enthusiastic about the change that their teachers are able to discipline them by denying them access to the lab. Even students and teachers not directly affected by the project are perceptibly influenced by it." (Franklin Institute Research Laboratories, 1968 Final Report.)

The relationship between teacher expectations and student achievement was investigated by Rosenthal and Jacobson (Scientific American, 1968). They selected at random 20% of each class in a California school and led the teachers to believe that, on the basis of scientific testing, these students could be expected to show dramatic achievement gains during the coming year. At the end of the year, all students, and especially those designated as "achievers", showed dramatic increases in measured intelligence. In grades one and two the experimental group gained more than twice as much as the control group (27 points as compared to 12 points for first graders and 16 points as compared to 7 points for second graders).

The Coleman Report adds a corroborating bit of evidence: "Of all the variables measured in this survey, including all measures of family background, and all school variables, these attitudes (interest in school, self-concept, sense of control) showed the strongest relation to achievement at all three grade levels" (Coleman, 1966). In the context of these studies, it becomes relevant to inquire into the expectations which Philadelphia teachers hold for their students. The New Teacher Survey (Schwartz, Department of Administrative and Survey Research, 1968) included the question "Do you agree or disagree that 'Children from poorer homes generally have the same native ability as other children.'?" Twenty six percent of the sample disagreed, that is, they said they felt that poorer children have less native ability than do others. In terms of both teacher training and democratic ideals this response is clearly unacceptable. It thus seems safe to conclude that 26% represents a minimum figure.

There is substantial evidence to support the view that the kind of teacher behavior encouraged by the Learning Centers project (indirect, non-punitive, supportive, willing to listen to students and use their ideas) is positively related to student achievement (Napier, 1967). Yet, results of formal studies can best be described as inconclusive. As another investigator summarized it:

"The results of the teacher behavior-student gain studies reviewed seem a bit sparse. Although the investigators employed categories which would seem to be relevant to pupil achievement, very few have produced significant relationships when measured as a correlate of student gain. What is more disturbing is their

inconsistency from study to study. Furthermore, the use of common terminology to describe the same teacher behavior does not exist. As a case in point, Sears' "amplifying ideas" is similar to Flanders' "clarifying behaviors". Flanders' "clarifying behaviors" are not the same as "clarity" in the Fortune and Rosenshine studies. Possibly some of the inconsistencies may be caused by the different educational settings (i.e. subject matter, grade level, etc.) and techniques (e.g., instruments, etc.) employed by the investigators." (Davidoff, p. 46)

Sisson (1967) discusses a fundamental problem that lies behind difficulties in relating teacher behavior and student gains. One does not have, and it may be extraordinarily difficult to arrive at, a reasonably accurate model of how students learn. The difficulties in building such a model are of two sorts. The first is "the entire behavioral process changes from time to time. Furthermore, changes may be triggered on the basis of data in store, not entirely on the basis of current sensory stimuli" (Sisson, p. 7). The second difficulty lies in the immense size of a human's storage capacity (e.g. memory). The results of this lack of a model of the learning processes are several and fundamental. Investigators lack a common framework, perspective, and language. It is difficult to evaluate the significance of research findings because studies are seen in isolation rather than in the context of a framework that could inter-relate and strengthen all of them. It is thus evident that additional approaches are necessary as a prerequisite to generating useful information.

Summary. There have been several studies which have investigated the relationship between the Learning Center approach and student gain. There have been very few positive results to date; most measures of student gain in basic skills do not discriminate between the experimental and control groups. Despite this lack of objective evidence of achievement in specific skills, almost all observers come away agreeing that the project is clearly successful in terms of student growth in other areas.

Several studies have found that the Learning Centers have a significant impact upon teacher behavior and school climate. Teachers exposed to the Learning Centers tend to be more indirect, less punitive, more supportive, more willing to listen to students and to use student ideas.

The difficulty with focusing upon teacher behavior is that different investigators have had inconsistent results in relating teacher behavior to student gains.

OBJECTIVES

The goals of the Learning Centers Project are many and broad in scope. The following statement of these objectives is very likely incomplete and distorted--incomplete because of the very multiplicity of goals, and distorted by the constraints of writing down concepts that are clearly

inter-related. The goals can be grouped under the following headings:

- I. Impact upon children in both the affective and the cognitive domains.
- II. Impact upon teacher's attitudes and behavior
- III. Impact upon the entire School District
- IV. Impact upon the philosophic framework within which the education of children is discussed

I. The Learning Centers Project hopes to affect children to the extent that:

- A. The child's self image is improved. This means that the child must feel he is cared for and loved, that he is a worthwhile person, that he has roots in a culture, a family and a community, and that he feels capable of doing worthwhile things. The child must have self-confidence.
- B. The child develops social competence. This means that the child must learn to get along with his peers without fighting, must learn to work cooperatively in both large and small groups. The child must learn to perceive adults and teachers as resource people who can assist him in his problems rather than as stern disciplinarians who are to be avoided if possible and coned if necessary. The child must learn to adapt to those situations where rules and regulations must be followed for the general welfare (i.e. fire-drills, cafeteria lines, etc.)
- C. The child develops creativity, flexibility, and resourcefulness. This means that, faced with a new situation, the child is able to permute the elements of that situation in several different ways. The child must be able to use more than one approach in problem solving rather than stubbornly attempting to do the same thing over and over after it has been shown to be fruitless. The child should be able to express himself in art mediums, including dance and theatre.
- D. The child develops self-regulation. This means that the child is able to control himself in the absence of external restraints. A child with self-regulation will show the ability to carry a project to completion. He will be able to choose an activity and stick with it for an appreciable length of time during free periods. He will be able to forgo immediate gratification in favor of long term payoffs. He will demonstrate a high level of ability to concentrate despite distractions.
- E. The child develops independence and ability to accept responsibility. This means that the child does not become easily frustrated. He must display a high level of tolerance for ambiguity and uncertainty. The child must be able to make

independent decisions and value judgements. He must be able to hold a minority opinion.

- F. The child develops literacy in the broadest sense of the term. This means that the child must understand and be able to use the concepts of science, mathematics, and language arts (i.e. speaking, reading, and writing). The ability to use concepts implies reasoning ability.
- G. The child's natural curiosity is expanded. This means that the child will look upon new or strange situations as exciting and fun rather than threatening; problems will be seen as challenges to be attacked and conquered. Learning will be seen as interesting and intrinsically worthwhile.

II. The Learning Centers Project hopes to affect teachers such that:

- A. Teachers will have high expectations for the pupil's ability.
- B. The classroom atmosphere is warm, non-punitive, supportive of the child's feelings, and relatively non-evaluative.
- C. There is opportunity for the child to participate in the setting of rules and in the choice of subject matter. The teacher, must, however, be recognized as the boss.
- D. Teachers consciously encourage creativity, intuition and imagination as well as reasoning ability. They do not emphasize rote memory. They utilize the interests of the child and encourage activities that are intrinsically fun as well as educational.
- E. Teachers avoid doing things for the child, encourage him to do things for himself and allow him the time he needs to do them. They encourage the child to talk and read, to interact with apparatus and objects, to sort, classify, build, manipulate and experiment. The child needs this practice; the teacher does not.
- F. Teachers always meet the child where he is in terms of interest, ability and emotional needs. In order to determine where the child is, the teacher must be aware of his cultural background and experiences. To meet the child where he is, the teacher must utilize small group and individualized instruction as much as possible.
- G. The teacher must give up any appearance of knowing all of the answers and must be a co-learner.
- H. Teachers should use a total approach rather than a linear approach, concepts should be presented in a multitude of different ways.

III. The Learning Center Project hopes to affect the school district to the extent that:

- A. The system will be more supportive of and rewarding to the kinds of teacher behavior described above.
 - B. The system will be able to respond more quickly than at present to the needs of teachers and children for special or different materials.
- IV. The Learning Centers Project hopes to affect the philosophic framework within which the education of children is discussed by:
- A. Providing a new model of teacher and student behavior.
 - B. Publicizing the new model (e.g. through published works and by showing it to visiting educators).

PROCEDURES

Experimental Treatment. The Learning Centers consist of a single room in each of nine elementary schools. Children come to the centers for a period which varies with different centers from one hour per week to one half time of each week. Each center has a large number of objects to manipulate, apparatus to work, games to play and many other materials chosen for their intrinsic interest and educational value. The atmosphere is relatively free, non-evaluative and designed to encourage as many aspects of emotional and intellectual growth as possible. The materials, layout, and activities of the Learning Center are quite similar to those of the modern English primary schools.

There are approximately nine affiliated teachers who are making an attempt to apply the methods of the Learning Centers in their regular classrooms. In addition, the Drexel School is a mini-school of five teachers and 100 students which is organized in its entirety as a Learning Center.

The Learning Center Headquarters serves the function of providing materials and supportive services to the centers and the individual affiliated teachers. In addition, the headquarters staff runs a number of staff development programs at the request of School District personnel. The headquarters also serves a great number of visitors, both from the local area and nationally and internationally.

Evaluation Design. The multiple goals of this project require broadly conceived criteria for selecting the foci of the evaluative effort. The following principles will be used as guidelines:

1. Factors selected should be indicative of overall program performance.
2. Questions selected for examination should provide decision-making information.
3. Questions selected should be such that new, relevant knowledge can be generated.

One of the major goals of this years' evaluation effort will be to design a comprehensive, longitudinal research plan. Several of the planned activities are in the nature of exploratory ventures that will hopefully, indicate fruitful directions for the future.

I. Impact upon children.

- A. Explore, on a post hoc basis, the achievement of children who have been exposed to Learning Center environments for an extended period of time. There are two possibilities here. Several schools expose the same children to the Learning Center for successive years. There are also a number of affiliated teachers whose regular classes are organized and conducted as a Learning Center.
- B. Chronicle over time, the children's reactions to the relative freedom of the Learning Center. This would include some assessment of the child's social competence, creativity, self-regulation, and independence.
- C. Assess the Learning Center's own compilation of anecdotal records and reports regarding children in the project.

II. Impact upon teacher's attitudes and behaviors.

The major emphasis here will consist of attempting to describe the behavior of the Learning Center teachers and the affiliated teachers. There are approximately nine teachers in each group. The primary goal of this effort will be to define, in an operational manner, what it is that all or most Learning Center teachers do and how this differs from what other teachers do.

III. Impact upon the School District

This will be a case study focusing upon both the project and the individual Learning Center teacher as agents of innovation. The method to be used is primarily that of interviewing non-project teachers, Learning Center teachers, principals, and other administrators.

IV. Impact upon the philosophic framework within which the education of children is discussed.

The major approach to this factor will be a record of the number and type of visitors. This data will be augmented with anecdotal material to the extent possible.

IMPROVING READING SKILLS

Director: Ida Kravitz

Co-Director: Natica Moose

Evaluator: Stephen H. Davidoff

Assistant: Barry Clemson

SUMMARY

Reading is learned by individuals. In the past, provisions for individual differences in reading instruction was commonly attempted by flexible grouping for instruction and in providing a variety of materials. Theoretically, this project will meet individual reading needs by diagnosing student weaknesses and prescribing specific reading skill instruction geared to overcoming these difficulties. Fourth, fifth and sixth grade public and non-public school children in target areas will visit the reading skill centers from one to four times a week depending on need. The accent of the centers will focus on providing sufficient hardware, software and specifically individualized skill instruction in order to meet the special needs of each under-achieving reader. It is the diagnosis and prescription feature which makes this project unique in that it goes beyond special grouping and varied materials. Since the reading skill center is supportive of the ongoing classroom reading program, it should provide the student with the opportunity of reinforcing skills learned in his regular class and the opportunity of applying them in new situations (i.e., transfer).

The present project seeks to improve reading performance in word attack skills, comprehension skills and reference skills. In addition, positive attitudes towards reading are viewed as an important component.

The evaluation plan is designed to compare students who visit the reading center with students whose school lacks this facility. Each of the project's objectives will undergo this type of analysis. In this way it may be possible to assess the impact of the skill center upon the students.

PROBLEM

There is no single theoretical basis for describing how one learns to read. The schools of thought are divided between a meaning emphasis and code emphasis. Actually it would seem to be a matter of degree rather than kind. Regardless of the philosophy, reading is a matter of word identification and comprehension of the identified symbol. The majority of deprived children experience greater difficulty than their more advantaged counterparts. It is possible that an impoverished environment may not provide the concepts and vocabulary needed to successfully interact with reading materials. One could hypothesize that a variety of materials in an attractive setting and special individualized instruction focused on word attack skills and comprehension might improve the reading performance of disadvantaged children.

REVIEW OF LITERATURE

How Reading May Be Taught. Since the one best way of teaching reading is yet to be discovered, many experts believe that an eclectic

approach is warranted (Russell, 1944; Mateta, 1966). This approach attempts to employ the popular doctrines of reading instruction in a comprehensive and integrated format which provides a wide range of visual, tactile, and auditory stimuli for the learner. Additional support for this composite approach is provided by Sera (1954). Summarizing 34 pertinent investigations, she concluded that provisions for a wide range of experiences and careful instructions dealing with word study increased vocabularies and word comprehension for reading.

Teacher Impact. Children learn to read using a variety of materials and methods. Pupils experience difficulties in all available programs and no one approach is distinctly superior in all situations and respects to the others (Bond et al., 1967). Perhaps as Heilman (1966) indicated, . . . "The nature of inconclusive research findings results from the fact that what the teacher does in the classroom has more impact on pupil growth in reading than does the prescribing or proscribing of instructional materials" (p. 622). The pupils of teachers who received in-service instruction showed higher mean reading achievement than the control group. Although failing to reach significance, nine out of ten comparisons favored the experimental group (Heilman, 1966). Further evidence for the presence of teacher variables comes from a study by Fry who found greater variations within a method than between methods (Fry, 1966, p. 668).

When the five highest ranking Cooperative Research Projects were compared to the five lowest ranking Projects, significant differences in the following teacher characteristics were found; student participation, teacher competence, class structure and perception, and attention to individual needs (Bond and Dykstra, 1967). Brzeinski (1966) also found an important teacher effect in his reading research in Denver Public Schools. In the present project, teacher in-service and staff development will be coordinated by the Reading Skill Center Instructor.

Reading Methods and Individual Differences. Ellson (1965) found that the efficacy of instructional methods in reading was related to characteristics of the learner, that is, students differ in how they learn to read. The appropriateness of a method or approach seems therefore to be dependent upon the particular child for whom it is intended. As Stake has indicated, children differ in their basic abilities, relevant knowledge, and the prior learning experiences which they bring to the learning situation (1961).

These differential backgrounds and experiences are generally categorized as learning sets (Harlow, 1949). Although originally defined in terms of knowledge relevant to the learning of a distinct task or a distinct class of tasks, they have been viewed as readiness to learn and knowledge of how to learn (Bloom, Davis and Hess, 1965).

Bloom and his associates (1965) have devoted considerable attention to learning set and have commented as follows:

Learning to learn is a far more basic type of learning than coaching the child on school learning. It includes motivating the child to find pleasure in learning. It involves developing

the child's ability to attend to others and engage in purposive action. . . (p. 15).

Factors Affecting The Reading Progress of The Disadvantaged.

Unfortunately, most children from low socioeconomic families have been found to be deficient in the language skills, prior experiences, and stimulating home environments (i.e., learning sets) which contribute to readiness for and success in school (Bloom et. al, 1965, p. 81). A number of studies have shown that failure to develop a proper learning set is one of the major problems of the disadvantaged. (Bloom et. al, 1965; Deutsch, 1964; Gray and Klaus, 1963).

Learning behaviors are themselves learned and are therefore subject to change, especially if attacked early enough. Because of the fundamental nature of reading, as a school skill, it is imperative that the disadvantaged child be provided with the learning set needed for reading. As Karp and Sigel have noted, this must necessarily be done within the context of the child's situation. It must begin where the child is and must have some meaningful relationship to the "idiosyncratic character of the intellectual, social, and emotional functioning of the child" (Karp and Sigel, 1965, p.407). It must proceed through carefully developed and sequential steps to bring him to the desired level (Ausubel, 1963).

There are, however, many blocks in implementing a viable reading program for inner-city youth. A primary source of these problems resides in his out-of-school experiences. The extent of outside influence upon school achievement has been reported by Coleman who noted that with current educational methodology, a child's school performance is highly predictable from knowledge of his background (Coleman, 1966). As much as 80 to 90 percent of a child's academic achievement is predictable in this way. (Burkhead, Fox and Holland, 1967).

Recent Programs for the Disadvantaged. In spite of these apparent difficulties, there is evidence that disadvantaged children can be helped. A successful reading program has been reported by Brazzel and Terrell (1962). They conducted a six-week readiness program for 26 culturally disadvantaged Negro first-graders in Tennessee. The program included intensified activities to develop perception, vocabulary, word reasoning, and ability and the will to follow directions. It also included educational television programs viewed in the home. Reading readiness scores rose to national norms as a result of this effort.

Wynn (1967) has recommended that the "overall reading difficulty and poor school performance of many disadvantaged children may be partially alleviated via a two-pronged program involving, first, reading materials based on children's actual experiences, i.e., meaningful and reality oriented in terms of the child's own background; and second, a partnership with parents in creating a home environment within which everyday living provides readiness for school..." (p.40). He further claims that a limited version of this recommendation enjoyed success for beginning readers of culturally deprived background (Wynn, 1963).

The results of a beginning reading program at the Finley School seem to corroborate the findings of Wynn (Froelich, Blitzer, and Greenberg, 1967). The program did not "rely upon any single theory or method of beginning reading instruction---linguistic, language experience, sight, phonic-word, basal or individualized; the approach was pragmatic and eclectic".

The above programs focused upon developing concepts, vocabulary skills and comprehension skills. This was done within the framework of meaningful material which was oriented to the background of the child.

Summary Of Related Research. A substantial amount of research on reading, individual differences in learning, and the economically disadvantaged child, has been conducted. That which related directly to this project has been reviewed. In summary, the reviewed material indicates that:

Children bring different learning sets to a given situation and thus have varying instructional needs. They differ in basic abilities, relevant knowledge and prior learning experiences. Children also differ according to the sensory mode which they use most effectively in learning. Some learn best with visual stimuli, others learn best with oral stimuli, while others need tactile stimulation.

A child will learn most effectively when the classroom experiences he receives are designed around his particular characteristics. In other words, the most effective instruction will be that which is manipulated to fit the child, rather than the other way around.

The literature reveals that economically disadvantaged children in the inner-city share certain difficulties with regard to their success in school. Children's learning sets are oriented more to an out-of-school environment than to typical in-school tasks. While instruction, to a large extent, can and should be oriented to their needs, they require help in developing the knowledge of how to learn. Ways of helping the child to feel his own worthiness and of realizing his ability to do well in school are needed. Success in reading would seem a prerequisite for scholastic achievement.

Regardless of the method used, the classroom teacher has been found to exert a major influence on student reading achievement. The need for a strong staff development program is clear.

Successful programs cited in this brief recap of the literature focused upon using a variety of materials which were oriented to the child's background in order to improve the basic reading skills.

OBJECTIVES

1. To increase reading vocabulary and improve word attack skills as evidenced by student gain in the Botel Phonic Inventory and the vocabulary subtests of the Iowa.
2. To improve reading comprehension skills as evidenced by student gain in the Iowa reading comprehension subtest.
3. To develop positive attitudes towards reading as characterized by numbers of books read, taken home, creative reaction to stories and willingness to discuss reading materials. (Attitude measured by Local Inventory).

EVALUATION BLUE PRINT

| OBJECTIVE | PROCEDURES | INFORMATION REQUIRED | MEASURING INSTRUMENT | RELEVANT SAMPLE | DATE OF MEASURE |
|--|---|---|--|--|--|
| 1. Word Attack Skills (Vocabulary) See 3.0 | 1) Encourage pupils to ask about new words 2) Oral reviews of new words, using them in sentences and discussing their meaning 3) Drill on word in context 4) Study of prefixes and suffixes 5) Practice with synonyms and antonyms | a. Class \bar{X}_1 , \bar{X}_2 , \bar{X}_3 on phonic inventory ("t" test for Correlated Sample) *b) Scores on vocabulary section of Iowa for experimental and control (Grade equivalent criterion) | Botel Phonic Inventory Iowa Basic Skills Test | 25% 25% 100% | Sept. Jan. May May '68 May '69 |
| 2. Comprehension Skills See 3.0 | 1) Ask pupils to select detail which support a given sentence or main idea 2) Practice in following written directions 3) Use of questions to have students draw conclusions 4) Practice in selecting topic sentence 5) Discussion of Author's purpose 6) Exercise in recalling sequences 7) Identification of tone | a. Class x on IRI (Increase by one book by Feb.) Correlated "t" test *b. Scores on Reading Comp. Exp. vs. control (Gr. Equiv. criterion) | Informal Reading Inventory Iowa Basic Skills Test | 25% 25% | Sept. Jan. June See #1 above |
| 3. Positive Attitudes See 3.0 | Class discussion; diversity of materials | a. Scores on pupil attitude measure (Group \bar{X}) with a pre- and post- gain design. ("t" test) b. Discipline cases and Reading (Case Study) | (Local Instrument) | 4,5,6 Exp. 4,5,6 Control 1 class/grade in each center | October March |

*This will be incorporated into a two-way ANOVA

PROCEDURES

- A. Is there a relationship between student Reading Gains and frequency of visits to the Reading Skill Center?

Statistical Hypotheses:

H_0 : There is no significant relationship ($p < .05$) between gain in the Iowa Test of Basic Skills Reading Subtests and the frequency of student ATTENDANCE at the Reading Skill Center.

To test the overall Statistical Hypotheses a contingency coefficient will be used as follows:

Contingency Coefficient

| Attendance | Student Gains | | |
|------------|---------------|---------------------|------|
| | LOW | AVERAGE | HIGH |
| Infrequent | | | |
| Average | | I O W A | |
| Frequent | | G A I N S C O R E S | |

1. Student gain will be computed as the difference between pre- and post-on IOWA test of Basic Skills--Grade Equivalent Scores. This will constitute the cell data of the above design.

An average gain will be computed and students will be classified as either average, above or below average.

2. Students will be classified as either average, frequent or infrequent attenders on the basis of attendance records kept in each center.

Should there be an overall significant relationship, the cells will be examined to determine the direction of significance.

Instruments to be used: (1) Reading Subtest of the Iowa.
(2) ATTENDANCE Record of the student.

- B. Did the availability of Reading Centers influence gain in student Reading Skills?

Statistical Hypotheses.

H_{01} : There is no significant ($p < .05$) difference in Iowa Reading Vocabulary Subtest Scores between the experimental and control group.

H_{02} : There is no significant ($p < .05$) difference in Iowa Reading Comprehension Subtest Scores between the experimental and control groups.

H_{03} : There is no significant ($p < .05$) difference in Iowa Reading Reference Subtest Scores between the experimental and control groups.

To test each of these hypotheses three separate single classification ANOVA will be used as follows:

| Experimental | Control | Experimental | Control | Experimental | Control |
|----------------------|---------|-------------------------|---------|---------------------|---------|
| VOCABULARY SCORES | | COMPREHENSION SCORES | | REFERENCE SCORES | |

Cell data for each design will be the individual scores on the indicated subtest. [Pre-Iowa Subtest Grade Equivalent (1968)]-[Post Iowa Grade Equivalent (1969)]=Gain

Instruments used: Iowa Tests of Basic Skills

- C. Has there been a change in student attitude towards reading?

Statistical Hypothesis:

H_0 : There will be no significant ($p < .05$) difference between the experimental and control groups with respect to attitudes toward reading as measured by the Local Reading Attitude Inventory.

Student "t" test for correlated samples will be employed to evaluate this hypothesis.

A Comparison of Attitude Scores for Experimental and Control Groups on Reading.

ATTITUDE SCALE

| Groups | N | Standard Deviation | Mean Gain Score | "t" |
|--------------|---|-----------------------|-----------------------|-----|
| Experimental | | | | |
| Control | | | | |

Cell data would include individual Reading Attitude Scores from a locally developed instrument. Following selection of relevant sample, a fall pre-test will be given. Post test in spring. Group gains in attitude between experimental and control subjects will be evaluated with Student "t."

Instruments to be used: Local Instrument -- See Attached Sample - Page 8.

Suggested control group: One class from each grade (4 through 6) will be selected from the control schools.

SUGGESTED CONTROL SCHOOLS FOR PROJECT 666

DISTRICT

1
2
3
4
5
6
7

SCHOOL

Powel
Douglass, F.
Read, Spring Garden
Claghorn, Dick
Dunbar, Elverson
Steel
Longfellow

The above schools could be used for both the Attitude Comparison and the Subject Achievement Comparison.

STUDENT READING

ATTITUDE INVENTORY

Directions: Have the students print their name, grade and school in the spaces provided on the answer sheet. Read each question slowly. The student is required to mark either YES or NO to each question by filling in the space provided on the answer sheet.

| | YES | NO |
|---|-----|-----|
| 1. Is reading important? | () | () |
| 2. Do you think you are a good reader now? | () | () |
| 3. Do you think you are a good reader for your age? | () | () |
| 4. Would you like to be a better reader than you are now? | () | () |
| 5. Would you like to be able to read aloud to other children? | () | () |
| 6. Are you reading more books now than you read last year? | () | () |
| 7. Do you like to retell stories that you know? | () | () |
| 8. Is reading one of your favorite subjects in school? | () | () |
| 9. Do you like many different kinds of books? | () | () |
| 10. Do you like to take books home from school? | () | () |
| 11. Do you like to go to the library? | () | () |

SALABLE VOCATIONAL SKILLS

Director: Myron Cheiken

Evaluator: Dr. Stephen Davidoff

Assistant: Barry Clemson

SUMMARY

Unemployment is a major factor in the malaise of the inner city ghetto. Salable Vocational Skills (SVS) is a voluntary participation, Saturday morning program designed to provide inner city youth with skill reinforcement, skill acquisition, and occupational characteristics information in a variety of commercial and technical areas. Classes are held at four widely separated schools and cover about 35 different skill areas. The project runs 4 hours per Saturday for 27 weeks. Approximately 1700 high school students (one-fourth from the parochial schools) will participate.

The evaluation will attempt to determine the extent to which the SVS program effected participants':

- a) success in securing employment
- b) skill level
- c) occupational choice

PROBLEM

The inner city has been the scene of increasing tensions and violence. In discussing the reasons behind this societal breakdown, the Report of the National Advisory Commission on Civil Disorder states that: "The first (reason) is surely the continuing exclusion of great numbers of Negroes from the benefits of economic progress through discrimination in employment and education, and their enforced confinement in segregated housing and schools. The corrosive and degrading effects of this condition and the attitudes that underlie it are the source of the deepest bitterness and at the center of the problem of racial disorder" (p. 203).

The magnitude of Philadelphia's unemployment situation is illustrated by the attached table. (Table I was adapted from the U. S. Bureau of Labor Statistics, January - September, 1967 estimated averages and "Unemployment in Philadelphia" by James B. Crummett, Office of City Economist, Philadelphia, 1965, mimeo.).

TABLE I
UNEMPLOYMENT IN PHILADELPHIA

| <u>CATEGORIES</u> | <u>Total</u> | <u>White</u> | <u>Negro</u> |
|--|--------------|--------------|--------------|
| <u>SMSA, all ages, (Eight County Area including parts of N. J. U. S. Bureau of Labor Statistics)</u> | | | |
| Civilian Labor Force x1000 | 1,900 | 1,500 | 350 |
| Unemployed Persons x1000 | 71 | 44 | 27 |
| Unemployment Rate | 3.7% | 2.8% | 8.0% |
| <u>Philadelphia, all ages, (U. S. Bureau of Labor Statistics)</u> | | | |
| Civilian Labor Force x1000 | 850 | 600 | 250 |
| Unemployed Persons x1000 | 39 | 20 | 19 |
| Unemployment Rate | 4.6% | 3.3% | 7.7% |
| <u>Philadelphia, all ages, (Crummett)</u> | | | |
| Civilian Labor Force x1000 | 875 | 631 | 244 |
| Unemployed Persons x1000 | 58 | 33 | 25 |
| Unemployment Rate | 6.6% | 5.2% | 10% |
| <u>Philadelphia, 14-24 years old, (Crummett)</u> | | | |
| Civilian Labor Force x1000 | 159 | 115 | 44 |
| Unemployed Persons x1000 | 25 | 14 | 9.4 |
| Unemployment Rate | 16% | 12% | 21% |
| <u>Philadelphia, 14-19 years old, (Crummett)</u> | | | |
| Civilian Labor Force x1000 | 58 | 44 | 14 |
| Unemployed Persons x1000 | 13 | 8.0 | 5.0 |
| Unemployment Rate | 22% | 18% | 36% |
| <u>Philadelphia, 20-24 years old, (Crummett)</u> | | | |
| Civilian Labor Force x1000 | 102 | 72 | 30 |
| Unemployed Persons x1000 | 10 | 5.8 | 4.5 |
| Unemployment Rate | 9.9% | 8.0% | 15% |

There is a discrepancy between the figures cited by the Bureau of Labor Statistics and those cited by Crummett. Crummett feels that his figures are more accurate, but that even they are only minimum figures. In other words, the figures include only those people who are both out of work and who express an interest in getting a job. Neither Crummett nor the U. S. Bureau of Labor Statistics reflect those people who have given up looking for work.

In all categories Negro unemployment rates are double (or more) those for whites. The ratio of unemployment rates for White and Negro adults has remained roughly constant since 1964 while the ratio for Caucasian and Negro youth has steadily increased since 1956 (The Employment Situation for Negroes, U. S. Bureau of Labor Statistics, 1967, p. 15).

Two other factors operate to prevent inner city youth from finding available jobs. Very often the simple problem of getting from home to available jobs in the suburbs and back again is insuperable because of lack of public transportation routes. The other factor is that Negro youth generally lack contacts in the employment markets and there is no adequate counseling service available. (The Employment Situation for Negroes, 1967, p. 15.)

The Salable Vocational Skills project is intended as an avenue toward the attainment of job entry skills for disadvantaged youth. This will be accomplished by upgrading existing skill levels through training and by providing extensive counseling as an aid to career choice and job procurement.

REVIEW OF LITERATURE

John Dewey argues that "popular education has always been rather largely vocational" and that "so-called cultural education has always been reserved for a small limited class as a luxury" (1917, p. 13). Indeed it is very difficult to define "vocational education" in such a way that it is distinguished from "education." The Encyclopedia of Educational Research (1960) says, "Vocational education is education for work--any kind of work which the individual finds congenial and for which society has a need. Vocational education is specialized education as distinguished from general education." (p. 1555). Under this definition medical and law schools would be vocational schools.

In our age of affluence, vocational education has come to mean job training for relatively specific positions in the lower echelons of "agriculture, distributive industries, health services, home economics, office, technical, and trade and industry" (Council on Vocational Education, USOE, 1968). Vocational education generally prepares one for blue collar or lower level white collar work as opposed to a "professional" career.

Research on vocational education, unfortunately, lacks the lengthy history and the robustness that practice has. One of the earlier studies (Keller, 1948) points out that financial considerations for a vocational choice are supplemented by the satisfaction gained from doing a job well, the desire for mastery over others, the desire for status among peers, and the desire to create.

Prior to 1951 studies of manpower needs were confined to states or localities (Encyclopedia of Educational Research, 1960, p. 1556). The National Manpower Council was established in 1951 to continually appraise the problems and policies bearing upon manpower utilization and to report its finding to policy makers and the public. Thus only since 1951 has there been any attempt to appraise manpower preparation policies in terms of national needs.

Research in the area of evaluation of vocational education is limited. There are no standardized tests for measuring achievement in trade or industrial occupations that this reviewer is aware of (Encyclopedia of Educational Research, 1960, p. 1527). Various state civil service bureaus have, however, established job competency criteria that may have possible use in evaluating these programs. Until very recently the number of students in any one course was quite small, the job competency criteria are difficult to administer, and the cost of evaluation has been in most cases prohibitive. Salter is one of the very few educational researchers to even begin work in this area.

Many vocational educators have evaluated their programs in terms of graduate job success. Up to 1960 no long term, in depth studies of the success of vocational education graduates had been done (Encyclopedia of Educational Research, 1960, p. 1528). Recently, more vocational education research has been completed. The Institute for Research on Human Resources (the Pennsylvania State University), the American Institute for Research (Pittsburgh), USOE, and the Education Committee of the States have all participated in or are currently involved with broadly based research on vocational education. The remainder of the review will be devoted to this effort.

Kaufman, et, al, concluded in An Analysis of the Comparative Costs and Benefits of Vocational vs. Academic Education in Secondary Schools (1967 a) that vocational training has a relatively high payoff in terms of jobs and earnings, and should therefore be expanded. Yet he also found that less than one-third of the vocational education graduates enter a field (or related field) for which they were trained (1967b). This finding is consistent with other studies (Ewinger, 1965).

The American Institute for Research surveyed 10,000 vocational and 3,000 academic graduates from 100 high schools (graduating classes of 1953, 1958 and 1962) (Ewinger, 1965). Vocational graduates surveyed showed little mobility. Less than three percent moved to another city for their first job and eleven years after graduation, 87% still reside

and work in the city where they went to school. Only 10% moved to a new city in 11 years. It thus seems reasonable to conclude that the skill level of a region's work force will be closely related to the quality and quantity of that area's training programs.

Approximately one-half of vocational graduates consult guidance counselors for course selection information. Only one-fifth do so for job selection (Kaufman, 1967b; Ewinger, 1965). Inadequate employment counseling and the need for drastic improvement is also cited by Minear (1967).

Program rigidity and insufficient attention to changes in manpower needs are also cited in the research. One possible method of keeping programs up-dated is to utilize advisory committees made up of representatives of business, industry and government from the local area. Because of the low mobility of vocational graduates cited earlier, reasonable decisions could be made on the basis of regional needs.

The literature indicates a recent movement towards broadly based evaluative research in vocational education. These investigations have begun to determine the degree to which our vocational schools are meeting the nation's demands for trained manpower and the individual needs for salable skills. Hopefully, programs to upgrade skill levels will continue to improve as a result of this research.

The Franklin Institute's (FIRL) evaluation for the 1967-68 SVS program is quite lavish in its praise--assessing the Project as organized and operated in a "well conceived and efficient" manner. Other FIRL comments included "competent, personable teachers," "enthusiastic students with a personal commitment to the instruction," "excellent equipment," and "materials which are usually in good supply." One of the procedures utilized by FIRL was a telephone survey of two groups of 50 students each conducted in early summer. The groups were categorized on the basis of 50 or more hours of instruction (high group) or less than 50 hours of instruction (low group). The high group had a slightly (but non-significant) higher summer employment rate than the low group. No comparison was made for other students. In summary, the evaluation for the 1967-68 program was mainly descriptive.

OBJECTIVES

The objective of the SVS program is to provide the student with:

- A. A salable skill which may be used immediately upon graduation from school, as evidenced by:
 - 1. Job competency in typing, keypunch and stenography as measured by civil service job proficiency criteria.
 - 2. Congruence between the areas of job competency and the manpower needs of Philadelphia as determined by:
 - a. Harms, Louis T. and James, Rosella; Manpower in Pa.: 1940-1963; Projection to 1980, Pa. Department of Community Affairs, 1963.
 - b. The Philadelphia Branch Offices of the U. S. Bureau of Employment Security.
 - c. The U. S. Bureau of Labor Statistics.
 - 3. Employment rate of program graduates.
 - 4. Employment in the field of training for program graduates.
- B. Reinforce skills previously learned or which are in the process of being acquired, as evidenced by actual skill level change measured in words per minute for typing, keypunch, and stenotype classes.
- C. Engage in exploratory experiences which will be useful to an individual in his choice of career opportunity, as evidenced by:
 - 1. The students own perception of and attitude toward the value of the experience as measured by a survey questionnaire.
 - 2. A decreasing incidence of exploratory behavior in the upper grades (i. e. 12th graders should explore less frequently than 11th graders and so on).

PROCEDURES

Program Description. Salable Vocational Skills (SVS) offers Saturday classes in a variety of vocational and technical skill areas. The classes are aimed at disadvantaged youth and are located at the three existing vocational technical schools (Bok, Dobbins and Mastbaum) and at Bartram Upper Magnet School. The project goals (Salable Vocational Skills, grant proposal, 1967, page 71) are:

- . "To acquire a salable skill which may be used immediately upon graduation from school."
- . "To reinforce skills previously learned or which are in the process of being acquired."
- . "To provide exploratory experiences which will be useful to an individual in his choice of career opportunity."

Project administrators insist that all goals are equally important for the student and thus cannot be ranked.

Approximately 1700 students from all over the city will participate in this program. One-third to one-half of these students will be seniors, one-quarter juniors and the rest sophomores and freshmen. About one-fourth of the students will come from parochial schools. Nearly one-half of the participants will study commercial subjects (i. e., typing, data processing) and the others will be distributed among 20 subject areas in shop or commercial art.

. The project is completely voluntary; students receive no direct, immediate payoff for their participation. All teachers for the project are regularly appointed instructors in the subject area that they teach for SVS.

The SVS program is beginning its fourth year of operation. The first year (1965-1966) the program included four months of 2 hour, 5 day a week after school sessions and a month and a half of regular summer school sessions. This program serviced 7500 students during the regular school year and approximately 1300 students during summer school.

The summer school component was eliminated for the 1966-67 year. During the regular school year the project consisted of 2 hours a day, 3 days a week (after school) and 4 hours on Saturday mornings for a period of 27 weeks. The project operated in several schools in all eight districts these first two years.

During 1967-68 the project scheduled all classes on Saturday mornings, primarily because of budget reductions. Only four "magnet" schools were utilized because in this way higher quality courses could be offered. The present project is essentially unchanged from 1967-68.

| PROGRAM OBJECTIVES | PROCEDURES | INFORMATION REQUIRED | INSTRUMENTS | SAMPLE | TIME OF MEASUREMENT |
|--|--|---|--|---|---|
| <p>A. To acquire a salable skill.</p> <p>1. Student job competency.</p> <p>2. Assessment of Project congruence with Phila. manpower needs.</p> | <p>To supplement the normal school schedule with classes on Saturday mornings. To provide extensive guidance in course and vocational choice.</p> | <p>1. Job competency scores in typing, keypunch, and stenography.</p> | <p>1. Standard words per minute tests.</p> | <p>1. 100% of Seniors attending these classes 10 or more times.</p> | <p>1. Periodically</p> |
| <p>3. Post Graduate employment rate.</p> <p>4. Post Graduate employment in field or training.</p> | <p>2. Program records and published data.</p> | <p>2. N/A</p> | <p>2. N/A</p> | <p>2. N/A</p> | <p>2. Prior to 1, Feb. 1969.</p> |
| <p>B. To reinforce Skills</p> <p>1. Skill increase in typing, keypunch, and stenography-- as measured by performance.</p> | <p>1. Same as above.</p> | <p>3. Jobs attained.</p> <p>4. Field jobs are in.</p> | <p>3. Survey</p> <p>4. Questionnaire to be designed.</p> | <p>3. 100% of students in program at end.</p> | <p>3. May 1 to May 15</p> |
| <p>C. To engage in exploratory behavior</p> <p>1. Students perception of value of exploring.</p> | <p>1. Allow students to switch areas freely.</p> | <p>1. Pre & Post Test Scores.</p> | <p>1. See A-1</p> | <p>1. 100% of non-Seniors</p> | <p>1. See A-1</p> |
| <p>2. Decreasing incidence of course switching in upper grades.</p> | <p>2. See C-1</p> | <p>1. Student Attitude</p> <p>2. Program Records</p> | <p>1. See A-3</p> <p>2. N/A</p> | <p>1. 100% of students in program at the end.</p> <p>2. 100% of exploring students.</p> | <p>1. May 1 to May 15</p> <p>2. When convenient</p> |

Statistical Design.

A. Salable Skills - One of the prime goals of the SVS program is to provide the student with a salable skill which may be used immediately upon graduation from school. We are defining the population for this goal as all those seniors who attend the same SVS class for at least two Saturdays.

1. Job competency.

H: SVS students will have significantly higher job proficiency scores in typing, keypunch, and stenography than will non-SVS students.

H : There is no significant ($p < .05$) difference
0 in civil service job proficiency scores in typing, keypunch and stenography between SVS and non-SVS students.

A single classification analysis of variance will be used to evaluate this hypothesis.

ANOVA

| | Typing | Keypunch | Stenography |
|---------|--------------------|----------|-------------|
| SVS | Words per minute | | |
| Control | performance tests. | | |

Cell data will be individual scores. Separate tests will be conducted for performance scores in typing, keypunch, and stenography. This design will seek to determine the differences between SVS and non-SVS, treatments (e. g. typing, keypunch, and stenography) and interactions.

2. Project congruency with Philadelphia manpower needs.

H: There is a high congruence between the course offerings of the SVS program and manpower needs of the Philadelphia metropolitan area. The manpower needs of the area are defined by:

- a. Harms, Louis T. and James Rosella, Manpower in Pa.; 1940-1963; Projection to 1980; Pa. Department of Community Affairs, 1963.
- b. The Philadelphia Branch Office of the U. S. Bureau of Employment Security.
- c. The U. S. Bureau of Labor Statistics.

This hypothesis will be assessed by comparing courses taught with manpower needs to determine categorical data only.

3. SVS graduate employment.

H: SVS graduates will have significantly higher employment rates than will non-SVS graduates.

H_0 : There is no significant ($p < .05$) difference in employment rates between SVS and non-SVS graduates.

Chi square will be used to test the statistical hypothesis as follows:

JOBS SECURED

| | | |
|---------|-----|----|
| | YES | NO |
| SVS | X1 | X3 |
| Control | X2 | X4 |

All cell data is number of students. This information will be secured with a questionnaire administered just prior to graduation. Hopefully it can be done through school test administrators.

4. SVS graduate employment in field of training.

H: For those students who secure jobs, a significantly higher proportion of SVS graduates will secure employment in the field of training than will non-SVS graduates.

H_0 : For those students who secure jobs, there will be no significant ($p < .05$) difference in the proportion entering the field of training between SVS and non-SVS graduates. The statistical hypothesis will be tested with chi square as follows:

| | Jobs in Field | |
|---------|---------------|----|
| | YES | NO |
| SVS | X1 | X2 |
| Control | X2 | X4 |

Cell data is number of students.

This data will be included in the questionnaire from "A-3" above.

B. Skill Reinforcement. A second prime goal of the SVS program is to reinforce skills previously learned or which are in the process of being acquired. The relevant population for this goal is defined to include all students who are taking the same course during both regular school and the SVS program and who attend at least 6 SVS courses (this is about 500 students in 25 courses). We will utilize a measure of actual skill level change in typing, keypunch and stenography courses.

1. Skill level gain in typing, keypunch, and stenography:

H: SVS students will increase more in typing, keypunch, and stenography skill levels than will non-SVS students.

H_0 : There is no significant ($p < .05$) difference between SVS and non-SVS student gains in typing, keypunch and stenography skills as measured by standard words per minute tests.

The t-test will be used to test this hypothesis as follows:

| Group Mean | |
|------------|--------|
| Scores | |
| SVS | X 1 |
| Control | X 2 |

Cell data will be group mean scores on word per minute performance tests. These tests will be administered periodically by the teachers as part of the ongoing curriculum.

(Project monitoring will include descriptive data on the adequacy of shop and commercial art course offerings. A further effort will also be made to secure student opinion in these areas.)

- C. Exploratory Experiences. The third major goal of SVS is to provide exploratory experiences that will aid the student in his vocational choice. This population is defined as all those students who switch from one SVS course to another (This is about 150 or 200 students). An estimated measure of the impact of this component will be made by utilizing a questionnaire which deals in part with the student's perception of the usefulness of the exploratory experiences.

In addition, a comparison will be made of the incidence of exploratory behavior by grade level.

1. Student perception of value of exploratory behavior:

H: SVS students will perceive the exploratory experience as helpful in choosing a vocation, as measured by a survey questionnaire (see A-3).

This data will be reported in percentages.

2. Incidence of exploratory behavior by grade level:

H: Ninth and tenth grade students should exhibit significantly more exploratory behavior than 11th and 12th grade students.

H : There is no significant ($p < .05$) difference in the incidence of switching courses between grade levels 9-10 and grade levels 11-12. Chi square will be used to test the hypothesis as follows:

| | | Incidence of Switching | |
|-------|-----------|------------------------|----|
| | | YES | NO |
| Grade | 9 and 10 | | |
| | 11 and 12 | | |

Cell data is number of students.

This data can be secured from program records.

Control Groups. Any evaluation of SVS is complicated by the fact that participation is voluntary. Social scientists have long been aware that volunteers differ markedly from non-volunteers. However, the kinds of differences vary depending upon the activities or purposes of the organization. Perhaps the best generalization one can make is that volunteers are more highly motivated in some ways than are others. This motivation may coincide rather closely with the organization's formal goals (i. e., in the case of SVS, to attain salable skills), it may be social in nature (i. e., because one's friends are there or to find a mate), or it may be quite practical (i. e., one might attend an SVS sewing course because of a shortage of clothes).

The point is that selection of control groups must take into account any skewing of the SVS group with respect to independent variables which influence the dependent variables under investigation. Of primary importance will be the determination of whether SVS students differ from non-SVS students with respect to subject grades and aptitude scores. One could hypothesize that the SVS students will differ from other students in these areas.

The statistical hypothesis is that there will be no significant ($p < .01$) difference in grade point average (in vocational courses) or in aptitude scores between SVS students and a stratified (by grade) random sample of non-SVS students. (SVS students are defined as all those who attend six or more SVS classes.) A t-test will be used to evaluate this hypothesis as follows:

| | Grade Point Average | Aptitude Scores |
|---------|---------------------------|--------------------|
| SVS | | |
| Control | | |

Cell data will be group means. Should there be a significant difference between groups on either measure, aptitude scores will be statistically equated in order to determine whether the groups differ in grades. It is assumed that a difference in grades after equating aptitude scores indicates that the group with the better grades is more highly motivated.

Assuming that there is no significant initial differences between SVS and Non-SVS students--control groups will be drawn from the SVS teachers regular school classes--for testing the gain in skill level and job competency hypotheses. In this way, teacher factors may be held relatively constant.

Sex and ethnic designation are important independent variables which influence employment. Thus the control group for the employment rate hypothesis must be a stratified (by sex and ethnic designation) random sample.

Information Sources and Instruments. A digatek Student Questionnaire will be developed that will provide the following data on students:

1. Age, grade, address, ethnic designation, home school, and sex?
2. Employment status?
3. Field of employment?
4. Summer or permanent employment?
5. Initial salary?
6. Apprenticeship?
7. Counselling experiences in school?
8. Perception of value of counselling experiences in school?
9. Extent of exploratory experiences in SVS program?
10. Perception of value of exploratory behavior in SVS program?

The same questionnaire will be administered to all students. The control groups will not be asked to respond to the section dealing with exploratory experiences. The instrument will be administered early in May and will secure the data required to test hypotheses A-3, A-4, A-5, C-1, and D-2.

Standard words per minute tests in typing, keypunch, and stenography will be administered periodically to all of the students enrolled in these courses in the SVS program. These "words per minute" exams are given as part of the ongoing program. For purposes of analysis, this data will be separated into two groups. First, Seniors who attend 10 or more sessions are considered to be seeking job competency. Second, all others who attend at least 6 sessions are considered to be seeking skill level increases. This data will be used to test hypotheses A-1 and B-1.

The information needed to test hypotheses C-2 and D-1 can be secured directly from program records.

Published data and program records provide all data necessary to test hypothesis A-2.

CCTV PROJECT

Director: Nina Eberman

Evaluator: Stephen H. Davidoff

Assistant: Barry Clemson

THEORETICAL CONSIDERATIONS AND OVERVIEW

The primary rationale for the original project was to video tape open-circuit ITV so that these programs would be available to target area schools permitting flexible viewing choices. In this way, open-circuit programs could be utilized more efficiently. The prior evaluations indicate that this objective was met and programs were available to a much greater degree than in the past. (Evaluation Reports, 1966-67-68).

There are, however, some who feel that CCTV may have more to offer than a tool for extending open-circuit programs. In a sense, the early evaluation design did not ascertain the effectiveness of CCTV -- it merely assessed the effectiveness of taped open circuit programs!

There is some indication that the future of ITV will be mainly closed-circuit. (Hudson, 1968). A casual observation of the metropolitan areas reveals that one or two channels are not sufficient to service the instructional needs of a large school system. It would therefore, be prudent to examine possible uses of CCTV and assess their instructional impact.

REVIEW OF LITERATURE

The research literature related to ITV shows that very little has been done to study this medium in the total context of school operation. Furthermore, little research has focused on ITV in the urban setting. Yet findings reported by Strvelle (1960) indicate that this would be a fertile area of investigation. Negro students learned significantly (.01) more physics than white students of equal ability in an ITV physics series (Strvelle, 1960).

Research on ITV has been amply criticized (Smedslund, 1964; Lumsdaine and May, 1965; Greenhill, 1967; Kittross, 1967; Stufflebeam, 1967). Criticisms fall into two categories: poor experimental design and unrealistic interpretations of results. The first category includes weak implementation of experimental variables; imprecise measurement; failure to provide sound theoretical, conceptual, and operational anchoring of tested hypotheses; and failure to rule out plausible, alternative explanations. The confusion of statistical and practical significances is included in the second category. Also included as a criticism is the selection of inconsequential topics for research and the failure of researchers to provide immediately usable information to administrators and specialists who must implement courses of action.

In spite of this criticism, television has been found an effective instructional medium. Lumsdaine and May (1965), in summarizing the results of 363 studies which compared ITV to conventional instruction, reported that 65 percent showed no significant difference, 21 percent

avored ITV, and 14 percent favored conventional teaching. It would seem that ITV has the potential for reaching 86% of the school population in an effective way.

ITV, however, should be more than just alternative to conventional instruction. McLuhan (1960, 1964) characterized television as a radically different medium of communication in that it favors a rapid grasp of complex gestalts and engenders a high degree of involvement in the viewer. This recommendation reflected Rogers' (1961) emphasis on the importance of affective variables in learning so that the student is not simply taught, but participates more fully in the learning process.

CCTV may have the potential for generating active pupil involvement especially if students within a given building are utilized in the production of programs. Present plans for the year anticipate this type of usage. Furthermore, plans are being formulated which will involve building principals. These individuals will select a "subject (s)" of high priority for a given building. The resources of CCTV will then be brought to bear on the problem (s) in an "action" research format.

OBJECTIVES

The objectives of this project fall into two categories. The first deals with an ongoing assessment of the project in terms of its original intent. The second category deals with new uses of closed-circuit TV as indicated in the objective section. The objectives in this category are somewhat general at this point. It is the intention of the Project Director to allow building principals to select specific subjects for CCTV in terms of building priority.

ON-GOING OBJECTIVES

1. To make open-circuit programs available on a more flexible basis to target area schools as measured by:
 - a. A log of what's taped
 - b. The Frequency of taped program use
 - c. Realistic estimate of breakdown time and cost

IMPACT OBJECTIVES

1. The development, production and broadcast of CCTV programs to meet specifically selected problems of a particular school in areas such as:

- a. Guidance (e.g., manners, grooming, dating)
- b. Basic skills (e.g., vocabulary, spelling)
- c. Subject areas (e.g., history, science)

The impact of the program will be assessed in terms of student gain on locally produced tests.

The program in each building will be 15-20 minutes long and may involve some student personnel. The specific topics will be selected by the building principal.

EVALUATION BLUEPRINT

| PROGRAM | OBJECTIVES | PROCEDURES | INFORMATION REQUIRED | MEASURING INSTRUMENTS | RELEVANT SAMPLE | TIME OF MEASUREMENTS |
|----------------------|--|--|--|---------------------------------------|-----------------|---|
| 1. ONGOING OBJECTIVE | | Recording of information required by the log. | <ol style="list-style-type: none"> 1. Listing of what is taped. 2. Frequency of usage - No. of pupils. 3. Breakdown time. | Local Produced Logs. | 100% | Monthly - Submitted by T. V.aides (see attached sample) |
| 2. IMPACT OBJECTIVE | The development, production and broadcast of locally produced CCTV programs to meet specifically selected problems of a particular school. | <ol style="list-style-type: none"> 1. Selection of topic. 2. 15-35 minute productions 3. Development of local tests. 4. Revision of local test. 5. Execution of design. | | Local tests and attitude instruments. | Pending | Pre-post design administered by production teacher. |

Scores on attitude measures.
Scores on local test.

RESEARCH DESIGN

1. General Guide Lines

- a. Subject area will be selected by a building principal.
- b. A building teacher will select the given lessons, and produce the program.
- c. Elementary programs will be 15 minutes in length for elementary schools.
- d. Junior and senior high productions may be 35 minutes in length.
- e. The teachers will develop pre-and-post-subject matter tests. They will administer these and score them.
- f. Attitude Instruments will be developed, if needed, by Title I personnel.
- g. The production teacher will also teach the Face-to-Face Treatment. All students in all the treatments will come from the T. V. instructor's classes with random assignments where possible.

2. General Design for Subject Matter Programs

Statistical Hypotheses

- H_{01} : There is no significant ($p < .05$) differences in locally produced subject matter test scores among students of high, low and middle initial ability independent of treatment.
- High = Upper 1/3 of class on local pre-test.
Middle = Middle 1/3 of class on local pre-test.
Low = Lowest 1/3 of class on local pre-test.
- H_{02} : There is no significant ($p < .05$) differences in test score (locally produced test) between the CCTV and Face-to-Face instruction groups independent of initial ability.
- H_{03} : There is no significant ($p < .05$) interaction.

To test the overall Statistical Hypotheses a multiple-Classification Analysis of Variance will be used as follows:

| <u>ANOVA</u> | | | | |
|--------------------------|------------------|---------------|-----------------|--------------|
| Initial Ability | | High Pre-Test | Middle Pre-Test | Low Pre-Test |
| CCTV Face-to-Face | | | | |
| | POST TEST SCORES | | | |
| | | U_1 | U_2 | U_3 |

T_1

T_2

Cell data would include Individual Test Scores on locally produced test.

In the case of the elementary teacher with one class, one third of children will be given each treatment. Since the lesson is only 15 minutes long--provisions for "minding" the two thirds of the class not involved should be relatively easy. It would be possible for the CCTV and F-to-F Treatments to be run simultaneously.

Instruments used to test the hypotheses.

1. Locally produced tests

General Design for Attitude Areas

Statistical Hypothesis

H_0 : There is no significant ($p < .05$) difference in locally produced Attitude Inventory Scores among students who receive the CCTV, Face-to-Face, and no treatment.

To test the overall Statistical Hypothesis a single classification ANOVA will be used as follows:

| CCTV | F to F | No Treatment |
|----------|--------|--------------|
| ATTITUDE | SCORES | |

Cell data would include individual difference scores on:

- A. Locally produced Attitude Inventory. As a pre-measure, one-half of each treatment group would respond to the inventory. This would serve as an indication of the group attitude prior to instruction.

Should there be an overall significant difference between groups, a post hoc comparison using Duncan's New Multiple Range Test. The following alternate hypotheses will be considered:

- H_{A1} : Students in the CCTV Treatment will have significantly better attitudes than the Face-to-Face Treatment.
- H_{A2} : Students in either the CCTV Treatment or the F-to-F will have significantly better attitudes than the no treatment group.

Instruments:

Locally produced Attitude Scale

4. Overall Comparison

To be reported in terms of % of given treatments found EFFECTIVE.

| Areas of Concern | CCTV | F-to-F | No Treatment |
|------------------|------|--------|--------------|
| 1 | | | |
| . | | | |
| . | | | |
| 35 | | | |
| $\Sigma+$ | | | |
| $\Sigma-$ | | | |
| Σ NSD | | | |

CCTV MONTHLY
SUMMARY

1. NAME OF SCHOOL (Please Print)

2.

(30 DAYS)

3. PERIOD OF REPORT: FROM

TO

BREAK-

 $\frac{1}{2}$ DAY

() DAY

() $1\frac{1}{2}$

() 2

() $2\frac{1}{2}$

() MORE

IF MORE STATE

4. DOWN TIME:

5. PROGRAMS RECORDEDa. NAME

NUMBER OF TIMES PER MONTH EACH PROGRAM

c.

b. YES

1

2

3

4

5

6

7

8

TOTAL OF ROW

1. SPANISH I

2. SPANISH II

3. BIOLOGY (HIGH SCHOOL)

4. DEVELOPMENTAL READING

5. COME READ TO ME A POEM

6. MATH - JR. H.S. - VOL. I

7. AMERICAN HISTORY (OUR NATION'S STORY)

8. SCIENCE (JUNIOR H. S.) (GENERAL)

9. SOUNDS OF MUSIC

10. STORY CORNER

11. STORIES FOR YOU

12. JUNIOR AMERICANS

13. SCIENCE - UPPER ELE.

14. SCIENCE - PRIMARY

15. SOCIAL STUDIES, 4th GRADE

16. MATH (MADISON)

17. FUN WITH ART - PRIMARY (1-3)

18. ADVENTURES IN ART - UPPER ELEM (4-6)

19.

20. COMMERCIAL

TOTALS

6. CAMERA REPORT

| a. | TOTAL TIME ON EQUIPMENT | MINUTES |
|-----|-------------------------|---------|
| 1 | 10 | 10 |
| 2 | 10 | 10 |
| 3 | 10 | 10 |
| 4 | 10 | 10 |
| 5 | 10 | 10 |
| 6 | 10 | 10 |
| 7 | 10 | 10 |
| 8 | 10 | 10 |
| 9 | 10 | 10 |
| 10 | 10 | 10 |
| 11 | 10 | 10 |
| 12 | 10 | 10 |
| 13 | 10 | 10 |
| 14 | 10 | 10 |
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| 90 | 10 | 10 |
| 91 | 10 | 10 |
| 92 | 10 | 10 |
| 93 | 10 | 10 |
| 94 | 10 | 10 |
| 95 | 10 | 10 |
| 96 | 10 | 10 |
| 97 | 10 | 10 |
| 98 | 10 | 10 |
| 99 | 10 | 10 |
| 100 | 10 | 10 |

OF PUPILS

TAPE

LIVE

MAGNIFICATION

b. USE

**NUMBER OF PUPILS
WHO VIEWED PROGRAM**

LIVE

TAPE

PROGRAM LENGTH

1. SUBJECT MATTER INSTRUCTION

2. ENRICHMENT

3. STAFF DEVELOPMENT

TOTALS

7. NAME OF T. V. AID

8. PLAY BACKS

a. NAME OF PROGRAM

1. SPANISH I
2. SPANISH II
3. BIOLOGY (HIGH SCHOOL)
4. DEVELOPMENTAL READING
5. COME READ TO ME A POEM
6. MATH - JR. H. S. - VOL. I
7. AMERICAN HISTORY (OUR NATION'S STORY)
8. SCIENCE (JUNIOR H. S.) (GENERAL)
9. SOUNDS OF MUSIC
10. STORY CORNER
11. STORIES FOR YOU
12. JUNIOR AMERICANS
13. SCIENCE - UPPER ELE.
14. SCIENCE - PRIMARY
15. SOCIAL STUDIES, 4th GRADE
16. MATH (MADISON)
17. FUN WITH ART - PRIMARY (1-3)
18. ADVENTURES IN ART - UPPER ELE. (4-6)
- 19.
20. COMMERCIAL

b. YES

- ()
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c. LIST NUMBER
OF PLAY BACKS PER
SERIES

NUMBER

- _____

d. TOTAL NUMBER STUDENTS
VIEWING PLAY BACKS
OF EACH SERIES

NUMBER

- _____

TOTALS

CONSOLIDATED
MONTH CCTV

| | | | |
|-----------------------|-------|--------|-------|
| 1. NUMBER OF SCHOOLS: | UPPER | MIDDLE | LOWER |
| 2. PERIOD OF REPORT: | FROM | TO | |
| 3. TOTAL DOWN TIME | | | |

4. PROGRAMS RECORDED

| a. NAME | b. TOTAL TIME PER MONTH | | c. TOTAL VIEWING |
|--|-------------------------|-----------|------------------|
| | RECORDED | PLAY BACK | |
| 1. SPANISH I | | | |
| 2. SPANISH II | | | |
| 3. BIOLOGY (HIGH SCHOOL) | | | |
| 4. DEVELOPMENTAL READING | | | |
| 5. COME READ TO ME A POEM | | | |
| 6. MATH - JR. H. S. - VOL. I | | | |
| 7. AMERICAN HISTORY (OUR NATION'S STORY) | | | |
| 8. SCIENCE (JUNIOR H. S.) (GENERAL) | | | |
| 9. SOUNDS OF MUSIC | | | |
| 10. STORY CORNER | | | |
| 11. STORIES FOR YOU | | | |
| 12. JUNIOR AMERICANS | | | |
| 13. SCIENCE - UPPER ELE. | | | |
| 14. SCIENCE - PRIMARY | | | |
| 15. SOCIAL STUDIES, 4th GRADE | | | |
| 16. MATH (MADISON) | | | |
| 17. FUN WITH ART - PRIMARY (1-3) | | | |
| 18. ADVENTURES IN ART - UPPER ELE. (4-6) | | | |
| 19. | | | |
| 20. COMMERCIAL | | | |
| TOTALS | | | |

5. CAMERA REPORT

a. TOTAL TIME ON EQUIPMENT _____ MINUTES

b. USE

NUMBER OF PUPILS
WHO VIEWED PROGRAM

PROGRAM LENGTH

TAPE

LIVE

1. SUBJECT MATTER
INSTRUCTION

2. ENRICHMENT

3. STAFF DEVELOPMENT

TOTALS

PHILADELPHIA TUTORIAL PROJECT

Director: James O. Williams
Evaluator: Stephen H. Davidoff
Assistant: Barry Clemson

PROBLEM

By and large, education has failed to meet the needs of the ghetto youth. It has not yet created an educational environment that will have positive effects upon ghetto children. As a result, the ghetto dweller is unprepared to function effectively in the main stream of contemporary society. Schools have been unable to deal with the numerical influx of children and adjust their traditional curricula in terms of the needs of the ghetto student.

According to Smith (1968). . . "The black youth in the ghetto has assessed his education as irrelevant because the majority imposes its cultural values and depreciates the cultural heritage of the minority. In some schools it has made that minority ashamed of its culture and its heritage " (p. 43).

The current project addresses itself to the multifaceted problems of the ghetto. The major thrusts of the project are:

- 1) community involvement in school
- 2) tutoring students
- 3) African history component

Through these activities the community will develop the strengths and resources needed to make progress in the solution of their problems.

OBJECTIVES

- A. To improve student performance in basic skills as evidenced by improvement in:
 - 1) Reading Comprehension
 - 2) Word Recognition
 - 3) Arithmetic Computations
 - 4) Problem Solving
- B. To develop positive attitudes toward self, school, and community.
- C. To foster greater community involvement in the educational process and to develop strength and community resources to deal with community problems.
- D. To make the community more aware of the role that the Negro has played in the development of this country.

Due to the vast scope of this project only Objectives A and D will be evaluated. Objectives B and C will be evaluated by the consultants assigned to this project (e.g. Educational Testing Service and Dr. Levin).

STATISTICAL ANALYSIS

- A. Does exposure to the tutorial project influence student performance in basic skills?

H_0 : There are no significant differences ($p < .05$) between the special tutee, regular tutee, and non-tutee groups with respect to their performance on the Iowa Test of Basic Skills.

Special Tutee Group: will experience treatment during the school day and after school

Regular Tutee Group: will experience tutoring after school only

Non-Tutee: do not attend the tutoring session.

ANOVA

| | Special Tutee | Regular Tutee | Non-Tutee |
|-----------|---------------|---------------|-----------|
| 4th Grade | | | |
| 5th Grade | SCORES ON | IOWA | TEST |
| 6th Grade | | | |

The hypothesis will be evaluated by using a two way analysis of variance. The cell data will consist of individual Iowa Gain Scores. In addition, interaction will also be investigated.

- B. Do students who attend the African history component feel more positive about themselves and their cultural heritage?

H_0 : There will be no significant difference ($p < .05$) between attenders and non-attenders with respect to their feelings toward self and others as measured by the Semantic Differential.

ANOVA

| EXPERIMENTAL | CONTROL |
|--------------|-----------------------|
| SCORE ON | SEMANTIC DIFFERENTIAL |

A single Classification ANOVA will be used to analyze this hypothesis.

The cell data will be individual responses on the Semantic Differential.

EVALUATION BLUE PRINT

| OBJECTIVES | PROCEDURES | INFORMATION NEEDED | INSTRUMENTS | SAMPLE | DATE |
|--|----------------------|--|-----------------------|-------------------------------|---|
| 1. Student performance in Basic Skills | 1. Tutorial | Scores on Achievement I Tests | IOWA | 4th Graders Duckery School | 1968 Pre Iowa 1969 Post Iowa |
| 2. Negro Awareness | 2. African Component | Scores on Locally Produced Attitude Instrument | Semantic Differential | Adults | Pending (Tentatively) January - June |

OUT OF SCHOOLS
SCIENCE SEQUENCED
FOR PAIRED
SCHOOLS

Director: Samuel LePow
Evaluator: Stephen H. Davidoff
Assistant: Barry Clemson

SUMMARY

Sixth grade children representing each of the eight Philadelphia Public School Districts will attend morning sessions at the Franklin Institute one day a week for a seven-week cycle. Each weekday, a different pair of schools will participate, thereby, involving the same ten schools each week for the cycle. The two planned program cycles will involve 700 children and 20 teachers from 20 different schools.

The first cycle will be used as a "tooling-up period." During this time, instruments will be developed. During the second cycle, measurements of science information and student attitudes will be made.

PROBLEM

The complex problem of urban unrest has manifested itself within the public school as evidenced by the recent confrontations between students of different races.

As a step toward achieving equality of educational opportunity, plans have been suggested which would tend to reduce defacto segregation. To this end, busing of ghetto children into all-white schools has been accomplished. This has relieved some over-crowding and has exposed children of different backgrounds to one another. When reverse busing was recently suggested, violent protests of white parents were vividly evident.

As an interim solution, it might be possible to select a neutral site where black and white pupils might periodically meet and experience joint educational experiences.

The current project seeks to bring children from paired schools together at the Franklin Institute for instruction in science. This community resource has rich facilities and equipment not available in the home schools. The children will work together in the laboratories for workshop activities, developmental sessions, and have lunch together. It is anticipated that the interactions in these activities will promote interracial understanding, motivate science learning, facilitate linguistic responses and reduce social isolation.

REVIEW OF LITERATURE

Historical Aspects of Science Education. The teaching of science in our nation's schools can be categorized into four periods each showing a predominate kind of objective:

| | |
|--------------|--|
| 1751-1872 | Practical and expository |
| 1872-1900 | College Preparatory |
| 1900-1955 | Evolution from College Preparatory to functional |
| 1955-present | Structural revision aimed towards scientific literacy and national defense |

Science Education Prior to 1900. The January 1, 1750 issue of the Pennsylvania Gazette announced the course offerings of the soon-to-be-opened Philadelphia Academy. Among the choices were Navigation, Astronomy, and Natural Philosophy (i.e. Physics). And so, science found its way into the structure of the secondary school curriculum. Its place was perfectly consistent with the aims of the academy. As Franklin proposed: "Those things that are likely to be most useful and most ornamental; regard being had for several professions in which they are intended". . . should be taught. (Meyer, 1957)

The Boston English High School, 1821, continued to emphasize the practical aspects of science. Its curriculum included Natural Philosophy, Chemistry and Natural History (Botany and Zoology). This program lacked integration of Botany and Zoology and laboratories. Demonstrations were few. The heavy emphasis focused on the learning of facts of practical value (Richardson, 1963). Since this school was to provide terminal education for the sons of merchants and artisans there was no particular emphasis on college preparation.

During the first 75 years of the 19th century, the academy declined and was gradually replaced by the Public High School. As the academy decreased in numbers it became more limited in its function and finally emerged with a college preparatory purpose. In 1872, Harvard College announced the "acceptability of high school science courses of study, required experiments and various pre-requisites. High School texts became nothing more than a revised version of the college book.

During the 1870's, the work of Herbart Spencer and the social Darwinists began to influence American education. In his book, Education: Intellectual, Moral and Physical, he spells out education for complete living. His central thesis was that education is the study of science. Cremin credits Spencer with decisively influencing the formulations of the Committee of Ten ("which gave parity to the natural sciences in the secondary school program") and the Commission on the Re-Organization of the Secondary Schools (Cremin, 1961).

Elementary schools generally lacked science programs. The few that existed were of the nature study variety. As the influence of the Pestalozzian belief in observation and the development of the object

lesson spread, science began to appear in the lower grades. William T. Harris gave the subject a modest beginning in the St. Louis School system (Meyer, 1957).

Summarizing briefly: The period of Science Education, 1751-1900, was characterized by --

- (1) The inclusion of science in the secondary school curriculum and the modest beginnings of elementary school science (after 1870).
- (2) A strong shift in the objectives of teaching science (in the secondary curriculum) from functional (i.e. occupation-oriented) to college preparation.
- (3) Curriculum-development was a local matter early in the period. By 1900, two new factors changed this. First, the colleges began (as early as 1872) to dictate standards and courses of study for college preparation. Second, National Committees began to work on Curriculum Problems (eg. Committee of Ten).

Mid-Century Trends in Science Education (1900-1950). The turn of the century brought a new educational age into being - the era of Mass Education. The forces of urbanization, immigration, and industrialization turned the dreams of Horace Mann into reality. By 1918, all states had a compulsory Education Law.

To attempt to characterize this period within the scope of this review is to render a gross injustice. The magnitude of change was staggering. To recognize a few of the more cogent points, we might say that this was the era of Progressive Education, John Dewey, Psychological movement in education, the mental testing era, the "whole child," education as social reconstruction and much more. To give these themes some order, we might select as a central approach - "(the) relationship between social reform, reform through education and the reform of education" (Cremin, 1961). That is, strong feeling evolved that popular schooling was the key to social progress. The ills of society could and would be solved by the school. Therefore, during this era, the school fell heir to or assumed many functions which had been executed by other social agencies.

In terms of science education a number of changes occurred. The more significant aspects are included in Paul De H. Hurd's Mid-Century Trends in Science Teaching, 1953. This work represents an analysis of 1800 articles over a fifty year period. The summary presented below seems to be consistent with an outcome of many of the factors suggested by Cremin.

- (1) Trends in the point of view of Science Teaching:
 - (a) Science is a way of life and not just subject matter.

- (b) It is directed toward human betterment.
 - (c) Stress is placed on concepts directed toward human betterment and is studied in light of its implications for contemporary society.
- (2) Trends in the objectives of Science Teaching:
- (a) Increased emphasis on problem solving relevant to contemporary living with a decreased emphasis upon the scientific method per se.
 - (b) Enrichment of leisure hours through science with college preparation dying out as an objective.
- (3) Trends in psychology of learning:
- (a) Transfer of acquired knowledge to solve future problems is of primary importance in the teaching of science.
- (4) Trends in the criteria for selection of science content and course organization:
- (a) Areas of human concern involving adjustment.
 - (b) Selection of content tailored to community differences.
 - (c) Less emphasis on major principles of science. They will grow out of areas dealing with human concerns.
 - (d) Integration of a wide range of science fields.
- (5) Trends in laboratory methods:
- (a) Growing dissatisfaction with "cook-books."
 - (b) Movement towards controlled-experiments.
 - (c) Some emphasis on student designing the experiment.
- (6) Trends in implementation:
- (a) More research activities, inductive methods of teaching, cooperative learning activities, and audio-visual aids to direct experiences.
 - (b) Text books more varied but change is mostly by addition rather than revisions.
- (7) Trends in new types of science courses:
- (a) Fusion of fragmented courses into General Science, General Biology, and Physical Science.

- (b) Provisions for more science in shop, industrial, and vocational courses, (Hurd, 1953).

In general, this era can be summarized as a period of transition. The key events were:

- (1) A K-12 structure for public education.
- (2) Commitment to mass education.
- (3) Assumption of non-intellectual functions.

The Innovations of the 1950's. With a commitment to mass education, the school tried to be all things to everyone. The attempt failed! The reaction has led to a second era of reform via the innovations of the mid-1950's. The situation crystallized via the attempt of the "all function school" to do everything for each "whole child" via life adjustment. The gross dissatisfaction burst upon the public scene in the form of books, articles, pamphlets, radio and TV programs. The early 1950's were reminiscent of the early 1890's - only this time, it was Progressive Education which was attacked. The public was reading and agreeing with Bell (Crisis in Education), Smith (And Madly Teach), Lynd (Quackery in the Public Schools), Woodring (Let's Talk Sense About Our Schools), and most influential of all - Arthur Bestor's, Education Wastelands.

Educational Wastelands. Let us examine Bestor's book as a case in point. His general assertion is that the ultimate function of all education is intellectual training, that is, "the deliberate cultivation of the academic disciplines. These disciplines have developed methods for solving problems.

In other words, education should develop people who can think critically. In order to think critically, you must have something to and methods for critical thought. Furthermore, it is the function of the school to distribute this kind of education to all citizens. It is through the ability to think that our democracy will be preserved. The failure of the school was the result of "the divorce of the school from scholarship and of teacher training from the Arts and Science" (Cremin, 1961).

Prejudice in Children. "From the point of view of society as a whole, the most important problem seems to be the child's attitude toward authority. Forced submission to authority produces only surface conformity countermauled by violent underlying destructiveness dangerous to the very society to which there seems to be conformity. Only a frightened and frustrated child will tend to gain safety and security by over simplified black-white schematizations and categorizations on the basis of crude external characteristics. Deliberately planned democratic participation in school and family, individualized approach to the child, and the right proportion of permissiveness and guidance may be instrumental in bringing about the attitude necessary for a genuine identification with society and thus for greater understanding" (Frenkel-Brunswick, p. 306).

EVALUATION BLUE PRINT

| OBJECTIVES | PROCEDURES | INFORMATION REQUIRED | MEASURING INSTRUMENTS | RELEVANT SAMPLE | TIME OF MEASUREMENT |
|-----------------------|------------------------------------|--|--------------------------|----------------------|---------------------------------|
| 1. Science Content | 1. Seven, 3 hour Science Programs | 1. Scores on Iowa Test of Basic Skills | 1. Iowa 1968 | 1. 25% random sample | 1. Pre-post |
| | | 2. Scores on Science Test | 2. Local Test | | 2. After Jan. 17, 1969 |
| 2. Attitude Component | 2. Integrated Learning Experiences | 2. Scores on Local Test | 2. To be produced | 2. 25% random sample | 2. Pre-post After Jan. 17, 1969 |

* Control Schools to be selected prior to January 1, 1969.

Summary. Science has been taught in the public schools prior to the founding of the United States. Recent events have fostered vast curriculum changes. Within this framework, fewer courses focus upon the diverse processes that are used to produce the conclusions of science, the ways of inquiry and the structure of scientific knowledges. Science is seen as a way of life and not just subject matter. The objectivity, willingness to experiment, healthy skepticism for "authority," and rejection of biases needed for scientific inquiry may have transfer value in terms of bringing about attitude changes necessary for a more democratic society.

OBJECTIVES

- A. To understand basic concepts of Physical Sciences as evidenced by the pupils' ability to:
 - 1. Recall basic factual information dealing with the principles of matter and energy.
 - 2. Define basic concepts and give relevant examples.
 - 3. Compare and contrast different forms of energy.
 - 4. Differentiate between matter and energy.
 - 5. Solving problems involving measurement of forces and motion.
- B. To develop positive attitudes towards fellow classmates of different races, nationalities and religions as evidenced by:
 - 1. Cooperative group work.
 - 2. Sharing of equipment and ideas.
 - 3. Consideration of others.
 - 4. Willingness to work with others.

PROCEDURES

- A. Did attendance at the Franklin Institute Program effect the Science Achievement of the participants?

H_0 : There are no significant differences ($p < .25$) between students who attend the Special Science Course and Control Groups on a locally produced Science Achievement Test.

This hypotheses will be evaluated utilizing a single classification analysis of covariance. The cell data will be individual scores on the locally produced science test. Composite Iowa Scores will be used as a covariate.

| CONTROL I (Predominately White School) | CONTROL II (Ghetto School) | EXPERIMENTAL (Integrated) |
|--|---|------------------------------|
| | SCORES ON LOCAL SCIENCE TEST IOWA COMPOSITE SCORE TO BE USED AS A COVARIATE | |

- B. Did attendance at the Franklin Institute Program effect student attitudes toward members of different races, nationalities and religions?

H_0 : There is no significant ($p < .25$) difference between the experimental and control groups with respect to their attitudes towards members of other races, religions and nationalities as measured by a locally produced attitude scale.

ANOVA

| CONTROL I | CONTROL II | EXPERIMENTAL |
|-----------|-----------------|--------------|
| | A T T I T U D E | S C O R E S |

This hypothesis will be evaluated using a single classification ANOVA. The cell data will consist of Pre-and-Post Attitude Scores on a locally produced instrument.

THE SCHOOL-COMMUNITY COORDINATOR

Director : George Green
Evaluator : Roger J. Fishman
Assistant : Robert Morgan

SUMMARY

The Philadelphia Board of Education has, in an effort to bridge the gap between the school and the community, added personnel, known as School-Community Coordinators, who go into the community and inform the parents of the school's program. They also bring back to the school information that will be useful to teachers and administrators.

The evaluation will ascertain whether or not the project has achieved its terminal objectives; notably, informing the community as to the objectives, programs, curricula and services of the school; keeping school staffs informed concerning the composition, distinctive need and concerns of the community; and to increasing parental participation in school-community related projects.

To evaluate the project the "School Program Questionnaire" and the "Teacher-Community Questionnaire" will be administered at the beginning and end of the year and analyzed by the chi square technique.

At PTA meetings the "School-Community Participants Checklist" will be administered and analyzed with a z-test to determine if there is a significant difference between those attending PTA meetings who know their coordinators and the proportion of those who do not.

PROBLEM

If the educational system of a city is to be effective, there must be an awareness on the part of both school and community of the activities taking place outside of each one's particular area of interest. In most disadvantaged areas there is a lack of communication between the community and the school. Parents of children in these areas are not aware of many of the school's activities and, partially because of this, they are unable to assist with the educational advancement of the child at home.

In dealing with a child's problem, the teacher can not always reach a satisfactory solution since the deprived child's problems are often rooted within the home. If the teacher's knowledge of the community can be increased, there should be a corresponding rise in his ability to communicate with students.

The addition of school-community coordinators should be an effective means of bridging the gap between the school and the community. Since the coordinators will be leaders of the community and will meet certain education requirements, they should be able to communicate with both of the target groups.

REVIEW OF LITERATURE

The idea of using subprofessional or paraprofessional workers in the human services is not new. However, current widespread use of indigenous workers, that is, persons drawn from neighborhoods and served by the project, as staff members of social agencies is a radical change in social service programs. One major impetus for this development came from the commitment of the OEO to find new means of bringing about "maximum feasible participation" of the poor themselves in the operation of the poverty program. At present, as a result of OEO's commitment, about 125,000 subprofessional workers are serving throughout the country in community programs (Reissman, 1967).

Contra Costa Council of Community Services in Walnut Creek, California, has found the use of subprofessional workers to be rewarding. Such workers are serving the poor people of the community as subprofessional workers through the Richmond Community Development Demonstration Project, a project made possible by a grant from the Office of Economic Opportunity (OEO). The project, which serves the city of Richmond, California, is demonstrating the means by which public agencies can incorporate these new workers into their operations. (National Conference on Social Welfare, 1967).

The magazine Children (1968) reported cases where a subprofessional provided needed, important, and significant services. The workers perform a "community building" service since they enable families in low income areas to make use of the institutions set up to serve them. The workers represent an important mechanism in bridging the communication gap between institution and home. As the number of such workers increased and their skill and ability improved with experience and training, their effect on the institutions and on professional workers increased.

Henderson (1968) said community aides can be used to assist staff in abating school problems. Like all school personnel, community aides should be screened, trained, and supervised. Professional staff engaging in the selection, training, and supervision of community aides must have respect for the adults and a belief that they can provide a valuable service.

Candidates for community aide positions will have a broad range of skills, educational backgrounds, and interests. Some will be more suited to work with students, while others will not. Those who are suited to work with students can serve as tutors, field trip escorts and other related jobs. Those who are suited to work only with adults can be assigned to make home visits, to make inquiries about absent students and to give the parents some insight into school activities.

Bank Street College of Education (1967) indicated that a community aide is beneficial because communication between middle-class teachers and lower-class pupils is frequently difficult due to language and cultural barriers, lack of common experiences, and frequent inability of the disadvantaged to express their real feelings appropriately and constructively.

Summary. Portions of the literature reviewed show how the community worker has benefited social welfare. There is evidence that the community worker is able to communicate more with the respondents than the professional. This is due in part to his being a member of that reference group.

Other literature implied that a school-community coordinator would be an asset to the educational process because the adults within the community would be able to identify with the schools through him.

OBJECTIVES

The School-Community Coordinator project has as its objectives

- a) To inform the community as to the objectives, programs, curricula and services of the schools.
- b) To keep the school staffs informed concerning the composition, distinctive needs, and concerns of the community.
- c) To increase parental participation in school-community related projects.

PROCEDURES

The School-Community Coordinator Service has been developed to improve lines of communication and to bridge the gap between the schools in target areas and the communities they serve. The coordinator will interpret the school program to the community, inform school people of the needs and concerns of the community, develop and support school-community activities, and visit individual homes to gain information which will enable schools to operate within greater awareness of the community. The coordinators, who must be residents of the community, have flexible work hours to permit them to work during, before, and after school as well as on weekends. They work with school, municipal, and agency personnel as well as with community groups and individuals.

Each target area elementary school is assigned one coordinator, and each junior high school or high school is assigned two. In general, there are one or two school-community coordinators for every one thousand to three thousand students. The coordinator's most important function is that of a liaison person between the school and the community--keeping each group informed and up to date with respect to the activities of the other. The coordinator may contact community residents by merely knocking on doors, through referral from school personnel, at community meetings, or upon the request of individuals within the community. She serves the teacher by setting up meetings with parents and by providing information.

Evaluation. Districts three and four of the Philadelphia School District have been randomly selected for this evaluation. The high schools, junior high schools, and elementary schools within these districts determine the neighborhoods in which the evaluation will occur. (See Appendix).

Effectiveness of the school-community coordinator will be judged by her impact upon community knowledge of the schools, attendance at PTA meetings, and teacher knowledge of the community.

H_{01} : There is no significant ($p < .10$) relationship between parent knowledge of the schools and meeting with a school-community coordinator.

To test this hypothesis the School Program Questionnaire will be administered to community members who have met with the coordinators and to members of the community who have not met with the coordinators. The instrument will be administered twice during the school year. The chi square technique will be used for analysis (Figure 1). For the pre-test analysis, cell data will be observed frequencies of responses to questionnaire items. For the post-test analysis, the cell data will again be observed frequencies of responses to questionnaire items unless the pre-test analysis indicates that initial differences exist. In this case the post-test analysis will be carried out using scores which have been adjusted for pre-test differences.

| | Community members who have met with a coordinator | Community members who have not met with a coordinator |
|---|---|---|
| Correct or favorable responses | O_1 (E_1) | O_3 (E_3) |
| Incorrect or unfavorable responses | O_2 (E_2) | O_4 (E_4) |

Figure I

H_{O_2} : There is no significant ($p < .10$) relationship between teacher knowledge of the community and meeting with a school community coordinator.

Testing of this hypothesis will be carried out in the same manner as the preceding hypothesis. The instrument for assessing teacher knowledge of the community will be a Teacher-Community Questionnaire.

H_{O_3} : There is no significant ($p < .10$) difference between community members who have met with their coordinators and those who were not in attendance at PTA meetings.

In order to test this hypothesis those persons attending PTA meetings will be asked to complete a short checklist which is to indicate whether or not they know their coordinators and why they attend PTA meetings. The z-test will be used to determine whether or not there is a significant difference at the .10 level between the proportion of those attending the meeting who know their coordinators and the proportion of those who do not.

Through the testing of the above hypotheses and continual process monitoring the following questions will be examined:

- a) Does the school-community coordinator provide members of the community whom she contacts with information about the schools that they would not receive in other ways?
- b) Does the school-community coordinator provide the teachers she contacts with information about the community that other teachers do not have?
- c) Does the coordinator influence parents to attend PTA meetings?
- d) Does the coordinator have an effect on each community member that she contacts?

Data and Instrumentation. To aid in the determination of whether or not the project objectives have been met, a number of instruments will be developed by the Philadelphia School District's Office of Research and Evaluation. These are:

- a. The School Program Questionnaire--a questionnaire which is to measure the amount of information the community members have with respect to the schools' objectives, programs, services, and curricula.
- b. The Teacher-Community Questionnaire is to determine the amount of information the teachers have regarding the composition, needs, and concerns of the community.
- c. The School-Community Participants' Checklist will be used to gather information on those people participating in school-community related projects.

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KINDERGARTEN AIDES AND SUPERVISORS

Director: Miss Frances M. Becker

Evaluator: Mr. Roger J. Fishman

Assistant: Mr. Robert Morgan

SUMMARY

The Kindergarten Aides and Supervisors Title I project has as its most important aims the improvement of childrens' attitudes toward school and self and the development of number and reading readiness. The project provides aides for kindergarten teachers so that the teachers' clerical loads will be lightened and they will have more time to spend on individual and small group instruction. It is hypothesized that the addition of a second adult to the classroom will have a positive effect upon the class members. The kindergarten supervisor is used to train the aides and to provide assistance to teachers and aides in their classroom work. Evaluation plans include the examination of the various teacher-to-aide ratios in order to determine the most effective plan for the use of aides in the light of cost and benefit and a study of teacher and teacher-aide characteristics and their relationship to class achievement. The latter phase of the evaluation may provide valuable information for administrators who are responsible for the assignment of aides to teachers. The effectiveness of the kindergarten supervisors and the value of the in-service program for aides will also be assessed. Flanders' Interaction Analysis, the Philadelphia Readiness Test, and Cattell's 16 P. F. are among the instruments being used in the evaluation. Statistical techniques will include multiple regression analysis, multivariate analysis of variance, and factorial analysis of covariance.

PROBLEM

Urban school systems are facing what may be termed a double plague. On the one hand, there are insufficient numbers of certified teachers; and, on the other hand, there is a rapid increase in the student population which these teachers must service. It is inevitable that the kindergarten teacher will become less and less effective as the size of her class grows larger. In A Report on Paraprofessionals in Pennsylvania and Recommendations to the Council of Basic Education Concerning Their Use it is stated that:

The paraprofessional by working in association with a professionally qualified person, is used in education to increase the effectiveness of the teacher. With proper utilization, the paraprofessional can increase the teacher's instructional effectiveness without performing duties which require professional education and experience (Rookey, et al 1967).

This report notes that teacher aides in Pennsylvania perform various duties; from clerical, non-instructional, and housekeeping duties (such as attendance, supplies, monitoring, cleaning, and supervising) to technical, instructional materials, and lay reader tasks

(such as reading stories, helping with mathematics period, taking charge of audio-visual aids, and correcting papers). It is readily seen that through the use of paraprofessionals in the classroom the teacher may be freed of many types of activities so that she can concentrate on giving individual attention to children, improving the quality of peer relationships, providing a wide variety of experiences for her pupils, giving greater opportunities for language development, observing children, and consulting with parents and school personnel.

The need for an effective and efficient kindergarten is crucial for the large urban school system. The education being provided most economically disadvantaged urban youth is a poor one. The inability of the schools to effectively educate such children may be attributed to factors such as increasing class size and lack of teachers - and to differences in environment and behavioral styles between student and teacher. To decrease class size or increase the number of teachers would be an economic impossibility for a large urban school system. The addition of paraprofessionals to the classroom, a less expensive proposition, would add a second adult to the classroom, lowering the pupil-adult ratio, and would provide opportunities for the child to be understood and helped to an extent not possible in a large class with no aide.

The proposed study will examine the kindergarten aide program in order to determine the effectiveness of such an addition to the classroom and to determine the most efficient ways of using the aide.

REVIEW OF LITERATURE

There is a definite need for the use of paraprofessionals in the school systems. This would make it possible for the professionals to use talents and skills that the collection of milk money and correction of true and false tests have kept submerged. These auxiliary people, of course, must be supervised and the talented paraprofessionals should be able to move up a scale of increasingly difficult jobs, (Howe, 1966). The point is that paraprofessionals represent an enormous untapped resource.

DeBernandis (1965) states that as engineers and doctors have looked to technicians for assistance in their work, the classroom teacher should turn the non-professional aspects of the teaching act over to assistants or aides.

Denemark (1966) says that the non-instructional aspects of the teaching profession are causing many promising teachers to turn to other careers. He feels that this problem would be alleviated by employing more aides or assistants.

Because of some resistance and administrative problems, not everyone applauds teacher aides, but most schoolmen surveyed find they are worthwhile.

J. Weldon Russell, Superintendent at Lewistown, Maine says that the aide has not intruded in any way upon the professional duties of the teacher and the system has worked out harmoniously.

R. W. Hornbeck, Administrative Director at Pasadena, California, says that disciplinary problems have decreased . . . and children are growing in respect for adult authority in general rather than limiting it to teachers. Even though the teacher aide could relieve the teacher of some duties, noted R. C. Van Raalte, Assistant Superintendent in Wisconsin's Department of Education, the conscientious teacher still finds it very difficult to provide the necessary adaptations in the instructional program to meet adequately the needs of the large enrollment (Cutler, 1964).

Esbensen (1966) asked the question if a properly trained aide should be permitted to perform limited instructional tasks under the general supervision of the classroom teacher and not be confined to clerical duties. His answer was yes. He concludes that the distinguishing characteristic of the qualified teacher is his ability to analyze the instructional needs of his students and to prescribe the elements of formal schooling that will best meet those needs. In this view, it is altogether proper for the aide to be more than a clerical aide. The usefulness of the teacher aide should be restricted only by his own personal limitations in whatever duties may be assigned to him by the regular classroom teacher.

Herman (1967) compiled a list of instructional and non-instructional functions which teacher aides have performed. These are according to types:

Instructional

1. Instructing children on the safe use of tools and materials
2. Maintaining decorum in and out of the classroom
3. Supervising creative activities
4. Conduct reading and writing sessions
5. Keep bulletin boards neat and up-to-date

Non-Instructional

1. Clerical work
2. Housekeeping
3. Provide medical assistance
4. Requisition and inventory materials
5. Grade papers

These functions have been utilized and proved to be successful in several school systems because they do not conflict with the basic instruction but ease the teacher's load.

After two years as a pilot project, plus four more as a full-fledged program, team teaching at San Diego, California, has emerged as a method of instruction that successfully integrates and employs the skills of teachers and aides (Lee, 1964).

Two-thirds of the systems using paid teacher aides make the educational requirement a high school education, while two-thirds of the systems which utilize volunteer aides require that they have at least an elementary education (NEA 1967).

A very few of the systems report having used teacher aides for many years. A small percentage of the programs reported here were begun before 1950. However, the number of systems with aides has increased greatly since 1960. Aide programs in 36.4 percent of the reporting systems were begun in the first five years of this decade. By contrast, 40.1 percent of the systems reporting aides programs indicated that the 1965-66 school year was the first in which teacher aides were used. It is probable that increased federal funding is responsible for some of this growth, although only one-fourth of the systems reporting teacher aides depended on the Elementary and Secondary Education Act for complete funding of their program, while the same proportion depended entirely upon public-school funds. Approximately half of the systems supported their teacher aide programs with funds from more than one source (NEA, 1967).

It is from a small beginning about two decades ago, that the use of volunteer and paid teacher aides has grown. In the 217 systems reporting teacher aides during the 1965-66 school year, over 40,000 aides were at work, and teacher aide programs involved millions of dollars in salaries alone (NEA, 1967).

Stafford (1962) conducted a study which was concerned with the quantitative aspects of teacher time utilization. He set forth as his purposes:

- (1) to report the effect of the teacher aide on the elementary teacher's time utilization and
- (2) to point up the need for deeper consideration of the definition of teacher aide roles.

He found that teacher activities requiring professional preparation failed to show a significant increase. Activities of a clerical nature, however, decreased significantly. The data indicated that the teacher alone was unable to maintain individual attention in an amount comparable to the pre-aide situation. Individual attention, in at least the same ratio, could be provided if the aide is permitted to share in this activity.

Summary. The studies reviewed indicate that there is a definite need for paraprofessionals in the educational system. They point out that the addition of aides helps to free teachers from non-instructional tasks and thereby improves the classroom's effectiveness. However, few of the studies in this area relied upon research methods for their evaluations.

OBJECTIVES

The following objectives have been identified for the Kindergarten Aides and Supervisors Project:

- A. To free the kindergarten teacher from duties not directly related to professional services as well as from some professional duties so that she will be able to carry out more individualized instruction than would otherwise be possible.
- B. To develop within each child positive attitudes toward self and school.
- C. To develop number and reading readiness.
- D. To provide for kindergarten classes a classroom climate which will be conducive for learning.
- E. To provide a supervisor who will train the kindergarten aide and give useful assistance to the teachers and aides.

PROCEDURES

For the 1968-1969 school year 161 kindergarten aides will be assigned to Title I schools in the Philadelphia School District. The ratio of aides to teachers will vary according to the needs of each school in which they are utilized. However, the following ratios will be found: 0:1, 1:1, 1:2, 2:3.

In each of the districts under the Philadelphia School System there is a kindergarten supervisor who will observe teachers with and without aides and assist them in their classroom work. These people will be used as part of the monitoring process to insure that the procedures are being carried out as planned.

Evaluation. The Teacher's Questionnaire on the use of an aide will be administered as a pre-and post-test in order to measure the effect of the aides' presence on teachers' activities.

H_{O1} : There are no significant ($p < .10$) differences among teachers who have an aide full time, half time, or not at all in the amount of time spent on clerical and instructional activities, as measured by the Teacher's Questionnaire on The Use of an Aide.

The testing of this hypothesis will be carried out through a one-way analysis of variance with the aide-to-teacher ratio as the independent variable. (Figure 1.)

ANOVA TABLE - KINDERGARTEN AIDES AND SUPERVISORS

| Classes with Full Time Aides | Classes with Half Time Aides | Classes with No Aides |
|------------------------------|------------------------------|-----------------------|
| X_{11} | X_{12} | X_{13} |
| X_{21} | X_{22} | X_{23} |
| . | . | . |
| . | . | . |
| . | . | . |

Figure 1.

H_{O2} : There are no significant ($p < .10$) differences among teachers with and teachers without aides with respect to classroom climate and control.

In order to assess this hypothesis, the Flanders' Interaction Analysis technique will be used. Twenty experimental and twenty control classes will be randomly selected for analysis. From the pretest data each of the two groups will be rank ordered, based on the revised I/D ratio, so that a division can be made on the direct-indirect dimension. The ten teachers in each group with the highest revised I/D ratios will be considered indirect and the remaining ten will be considered direct.

A. The analysis will be a 2x2 analysis of covariance as pictured below.

| | Classes with Aides | Classes without Aides |
|----------|--------------------|-----------------------|
| Indirect | X Y | X Y |
| Direct | X Y | X Y |

Figure 2.

The covariate will be pretest data and the criterion measure will be the post test data from the interaction analysis. The results of this analysis will enable us to answer questions with respect to classroom climate and control.

The revised I/D ratio for rows 8 and 9 of the interaction analysis will be used for this purpose. This is a ratio made up of teacher behaviors which occur immediately after a pupil stops talking. If the teacher praises or encourages, accepts feeling, or accepts or uses a student idea, these are identified as indirect, that is, they have the effect of expanding pupil freedom; but if the teacher criticizes, justifies his authority, or gives directions, this is classified as direct teacher behavior, and tends to limit pupil freedom. The measure used is a ratio of indirect to direct teacher behavior, so that a high score reflects more pupil freedom; a low score, more teacher control.

H_{03} : There are no significant ($p < .10$) differences among kindergarten pupils under teachers with aides and teachers without aides in number and reading readiness test scores.

H_{04} : There are no significant ($p < .10$) differences among kindergarten pupils under teachers with aides and teachers without aides in attitude toward school.

H_{05} : There are no significant ($p < .10$) differences among kindergarten pupils under teachers with aides and teachers without aides in self concept.

The instruments used to measure the dependent variables of hypotheses three, four, and five are The Philadelphia Readiness Test, The Student Attitude Toward School Inventory, and The Way I Feel About Myself, respectively. The analysis will take the form of a multivariate one-way analysis of variance in order to account for any intercorrelations among the three variables (See Figure 3.)

| Classes with Full Time Aides | | | Classes with Half Time Aides | | | Classes with No Aides | | |
|------------------------------|-------|-------|------------------------------|-------|-------|-----------------------|-------|-------|
| X_1 | X_2 | X_3 | X_1 | X_2 | X_3 | X_1 | X_2 | X_3 |
| . | . | . | . | . | . | . | . | . |
| . | . | . | . | . | . | . | . | . |
| . | . | . | . | . | . | . | . | . |

Figure 3. Multivariate One-Way Analysis of Variance

Other aspects of the evaluation for the Kindergarten Aides and Supervisors Project are the assessment of the effectiveness of the supervisors, the determination of the value of the in-service program for aides, and the formulation of criteria for assigning aides to specific teachers.

The Teacher Perception Reaction Scale will be administered to both teachers and aides to determine whether or not the consulting teacher has been effective. The percentage of favorable responses for each item will be tested to determine whether or not it differs significantly ($p < .10$) from .50. A questionnaire, to be developed locally will be given to the aides to determine their response to the in-service seminars. The data will be treated as above.

Cattell's 16 P. F. and a questionnaire on the characteristics of the teacher and the aide will be administered to examine the effect of various combinations of teachers and aides on the performance of children. A multiple regression analysis will be performed on the data with scores on The Philadelphia Readiness Test as the criterion measure.

Data and Instrumentation

- a) Flanders' Interaction Analysis
- b) Student Attitude Toward School Inventory
- c) The Way I Feel About Myself
- d) Philadelphia Readiness Test
- e) Use of The Aide Questionnaire
- f) Teacher Perception Rating Scale
- g) In-Service Program Questionnaire
- h) 16 P F
- i) Characteristics Questionnaire

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CREATIVE DRAMATICS

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Assistant: Mr. Robert Morgan

SUMMARY

Creative dramatics teachers have been assigned to eighteen schools to train teachers to be flexible and indirect in their relationships with children, and to strengthen the improvisation technique in children.

To evaluate this program, eight experimental classes taught by creative dramatics teachers and eight classes that did not receive this specialized instruction will be observed and administered the Self-Discipline and Cooperativeness Scale, Torrance Test of Creativity, Student Attitude Toward School Inventory, The Way I Feel About Myself, and The Iowa Tests of Basic Skills. Teacher measures include Flanders' Interaction Analysis and a work-shop questionnaire.

Data will be analyzed by the following statistical techniques, the z-test, t-test, and a multivariate analysis of covariance.

PROBLEM

Dynamic changes in the world today present new problems as well as new opportunities for teachers and youth leaders. The education of the whole child must be the aim of education rather than intellectual learning alone. Educational techniques should be sought that will be effective in developing the major attributes of the well-balanced, happy, contributive personality. Creative dramatics is a successful means to that end, because it is democratic in method, teaches through conditioning, sharpens imagination and sensitivity, deepens human understanding, adjusts emotional tensions, develops resourcefulness and initiative, helps to build sound patterns of behavior, and stimulates body flexibility and ease in oral communication. Its special value to the adolescent group in providing a healthy emotional outlet should be recognized.

The Philadelphia Board of Education has incorporated creative dramatics teachers into the schools which are responsible for the education of the under-privileged child. The administrators feel that this program will be enthusiastically received by the children because it is based on the natural play instinct with which all children are richly endowed.

It is believed that as a result of this new program teachers will be flexible and indirect in their relationships with their pupils; thereby, improving these pupils' cooperativeness and self-discipline. Pupils are also expected to become more adept and creative in their problem solving. Positive pupil attitudes toward school and self are expected as a result of the creative dramatics program, and finally, the pupils' language art's abilities should be strengthened.

REVIEW OF LITERATURE

Creative Dramatics had its beginnings in 1911, with the publication of Alice M. Herts, "Study of Experiments Conducted in New York," which demonstrated the significant values of a free dramatic expression in children.

John Dewey's theory of education justifies the use of creative dramatics. He says, ". . . the primary root of all educative activity is in the instinctive, impulsive attitudes of the child, and not in the presentation and application of external material . . . spontaneous activities of children, plays, games, mimic efforts . . . are capable of educational use, nay, are the foundation stones of educative method." (Dewey, 1916)

England, has, for many years, made creative dramatics a part of the school curriculum. At the University of London, teacher education includes methods in creative dramatics, dance drama, children's theatre, and creative writing. Disadvantaged children who are not motivated to improve their language skills are studied in "Story of a School" which describes how, from 1940 to 1948, the use of child drama, creative dramatics, dance drama, modeling, and painting improved a school in Birmingham, England, the headmaster concluded:

The approach we evolved in the school had nothing revolutionary in its nature. It was based on two elementary facts reiterated by educators throughout the ages. We tried to give the children opportunities to move and to express themselves. We believed that the qualities which are developed in this way are of tremendous importance to all activities since expression in the arts gives not only a natural approach to academic subjects but also a more confident basis for tackling the difficulties of social relationships. If this is true, and I have a sincere belief that it is, it seems to me to be wrong to teach academic subjects before children have experience of expression in the arts. (Store, 1949)

In 1965, members of the Princeton High School English Department formed interested students into three drama companies. One of the main purposes was to have the drama program complement the classroom experience. By choosing works from the curriculum, this aim was partially satisfied. More was done to make the theatrical experience an educational one as well. To prepare the students for the productions, a series of pre-performance talks by faculty members and students was instituted. These were designed to give the students a way of looking at the play. In some cases it was a definition of the genre, in others, an analysis of the theme. This program is now in its third year at the school, and it has proven to be very effective.

Through identification with characters and things, a child "tries on life," experiencing joy, humility, sorrow, success in coping with failure as he moves toward self-fulfillment. A strong bond of friendship and understanding develops between the child and the character he portrays (Stephens, 1942). This is reinforced by Yeats' belief that children play at being great and wonderful people, at the dreams and ambitions they will put away for one reason or another before they grow into ordinary men and women. Using picture and storybook characters will help us to approach the goal of the White House Conference of 1960, that of providing opportunities for children and youth to realize their full potential for a creative life in freedom and dignity.

According to Froebel, make-believe which appears as play, is a transformation of reality, a wish-fulfillment, an occupation with one-self. In reality, what is considered play has its focus on involvement and in tense exertion of effort (Wright, 1967).

Slade (1952) pointed out that play is one of the most strenuous and creative forms of work. He believes play is the child's way of thinking, proving, relaxing, working, remembering, daring, testing, creating, and absorbing. While men in the business world make reference to the serious business of make-believe, educators are beginning to view play as an excellent basis for learning. It is highly possible that the serious play inherent in story dramatization possesses a power which favorably influences personal development, thus developing the child's interest and subsequent success in reading (Link, 1965).

Agnes Krarup (1960) stated that children have an ability to achieve absolute identification with characters of the books they read for fun and to live wholly within another period in their imagination. Since 1953, children have experienced the joy of becoming acquainted with characters in picture books and storybooks through participation in poetry and story dramatization. Today some 1800 young registrants delight in make-believe in the Seattle PTA-sponsored program in Creative Dramatics, "Let's Pretend with the Fours and Fives" (Winther, 1956).

Johnson (1956) wrote that "creative dramatics aims primarily to develop the child's faith in his creative power, to help him become independent in his thinking and to allow him to experience teamwork, democratic participation and group membership." It is designed to allow the release of strong emotional feeling and, if necessary, to direct that feeling into more healthful channels.

Although research data to substantiate such claims is lacking, there is some evidence that kindergarten children with articulation difficulties have reduced their consonant errors through participation in play activities involving creative dramatics techniques. Ludwig (1955) showed that a group of kindergarten children exposed to a three month program of creative dramatics activities made a significantly greater improvement in articulation than did a similar group of children

who did not participate in the activity. McIntyre (1958) showed that a group of older children significantly reduced the number of their articulation errors during a six-week creative activities program involving creative dramatics. More recently, Irwin (1963) conducted a study on the effect of creative dramatics on the personality of a large group of third grade children. The results, as indicated by the California Test of Personality, showed measurable changes in the personal and social adjustment aspects of personality.

Summary. The literature indicates that the free and spontaneous nature of creative dramatics produces an environment conducive to relaxed dynamic learning. Although much research into the values of creative dramatics is needed, present research studies point to the advisability of creative dramatics for children.

OBJECTIVES

The objectives of the Creative Dramatics project are:

1. To train teachers so that they will be flexible and indirect in their relationships with their pupils.
2. To develop self-discipline and cooperativeness within each child.
3. To develop and strengthen the pupils' creativity and problem solving abilities.
4. To improve the pupils' concepts of school and self.
5. To improve the language arts ability of pupils.

PROCEDURES

The Creative Dramatics Title I Project has twenty-four classroom teachers in eighteen schools who have been trained in the instructional technique of creative dramatics. Its purpose is to encourage listening and verbalization on the part of the children involved. The teacher may use creative dramatics during any part of the day as an adjunct to the curriculum. The basic technique is improvisation on the part of the pupils. Each child makes his own original contribution and is encouraged to do background reading and research in the areas in which he is interested. Much of the role playing is directed toward the solution of problems which come about through class study, e. g. literature follow-up.

An enrichment program is held once a week, after school, for twenty classes. Eleven Neighborhood Youth Corps students receive work training for fourteen weeks so that they can become after school aides.

In the Universities Related Workshop, teachers from five schools in West Philadelphia will be trained in creative dramatics. The schools involved are Huey, Lea, Locke, Drew, and A. Wilson.

Twenty consulting teachers from the Educational Improvement Program will also receive workshops in creative dramatics. There will be fourteen of these training sessions between October 3 and January 16.

Evaluation. Flanders' interaction analysis observations will be carried out for eight experimental and eight control classes during the first week of December. The eight experimental classes are taught by teachers who have been trained in creative dramatics. The following hypothesis will be tested:

H_{O1} : There are no significant differences ($p < .10$) between experimental (creative dramatics) and control (no creative dramatics) teachers in their relationships with their pupils, as measured by Flanders' Interaction Analysis.

In order to test this hypothesis, the I/D ratios of experimental and control classes will be used as the dependent variable. The statistical test will be a z-test for the significance of the difference between two sample proportions. If there is a significant difference between the proportions the null hypothesis (H_{O1}) would be rejected and one of the following alternative hypotheses H_{A1} would be tenable:

H_{A1} : The experimental group teachers are significantly ($p < .10$) more indirect and flexible than the control group teachers, as measured by I. A.

H_{A2} : The control group teachers are significantly ($p < .10$) more indirect and flexible than the experimental group teachers, as measured by I. A.

The differences in self-discipline and cooperativeness between the experimental and control classes will be examined in a pre-test-post-test design. A t-test will be used to test the hypothesis:

H_{O2} : There are no significant ($p < .10$) differences between experimental and control classes in self-discipline and cooperativeness.

Cell data (Figure 1) will be mean class gain scores from pre-to-post-test. If the hypothesis is rejected, one of the alternative hypotheses will serve to explain the results of the statistical test.

| Experimental (Classes with teachers trained in creative dramatics) | Control (Classes without teachers trained in creative dramatics) |
|--|--|
| X_{11} | X_{12} |
| X_{21} | X_{22} |
| . | . |
| . | . |
| . | . |
| X_{n1} | X_{n2} |

FIGURE 1.

- H_{A1} : Experimental classes are significantly ($p < .10$) more cooperative and self-disciplined than control classes.
- H_{A2} : Control classes are significantly ($p < .10$) more co-operative and self-disciplined than experimental classes.
- H_{O3} : There are no significant ($p < .10$) differences between experimental and control classes in creativity and problem solving, as measured by the Torrance Test of Creative Thinking.

The statistical analysis will be carried out by using a t-test. The design indicated in Figure 1 will be used with cell data being mean class gain-scores from the creativity test.

- H_{O4} : There are no significant differences ($p < .10$) between experimental and control classes with respect to their concepts of school and self, as measured by the Student Attitude Toward School Inventory and by The Way I Feel About Myself.

Two t-tests will be used to test the hypothesis and mean class gains for each of the above instruments will be the measures on the dependent variable.

H_{05} : There are no significant differences ($p < .10$) between experimental and control classes in language arts, as measured by the appropriate sub-test score of the Iowa Tests of Basic Skills.

To test this hypothesis a t-test will be employed. Initial class scores will be determined for grades one and five on The Philadelphia Readiness Test and the Iowa Tests of Basic Skills, respectively. With this information, the post-test scores can be adjusted, if necessary, for initial differences among classes.

The workshop phase of the Creative Dramatics Project will be evaluated through the use of a questionnaire given to the workshop participants. In addition, consulting teachers trained in creative drama will be compared with consulting teachers who do not have such training through the Teacher Perception Reaction Scale which will be administered as part of the New Staffing Patterns for EIP Schools Project. The null hypothesis, to be tested by means of the t-test, is

H_{06} : There are no significant differences ($p < .10$) between teacher perceptions of consulting teachers who have had training and those who have not had training in creative drama, as measured by the Teachers Perception Reaction Scale.

To evaluate the Neighborhood Youth Corps portion of the project a comparison group will be formed of NYC students who are working in areas outside of creative drama. A multivariate analysis of covariance will be used to determine if there are differences between these two groups with respect to attitude toward school, self-concept, and verbal ability. That is, hypotheses four and five will be tested for the evaluation of this phase with adjustments made for intelligence.

Data and Instrumentation

- a) Flanders' Interaction Analysis
- b) Self-discipline and Cooperativeness Scale
- c) Torrance Test of Creativity
- d) Student Attitude Toward School Inventory
- e) The Way I Feel About Myself
- f) Iowa Tests of Basic Skills
- g) Workshop Questionnaire

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MUSIC SPECIALIST TEACHERS

Director: Louis Wersen

Evaluator: Roger J. Fishman

Assistant: Robert Morgan

SUMMARY

In order to raise the level of musical knowledge of students within the school system, 23 Music Specialist Teachers have been assigned to various schools in the seven districts. These specialists are responsible for all the music education of their assigned classes. Evaluation of this program consists of administration and analysis of the following instruments as well as classroom observations.

The instruments to be used will be The Music Appreciation Scale, The Music Activities Participation List, The Philadelphia Music Aptitude Test, and The Way I Feel About Myself Inventory.

To analyze the data, the following statistical techniques will be used; the Student t-test, the Chi Square Analysis, and the Analysis of Covariance.

PROBLEM

Educators of today are faced with the problem of directing and nourishing students' critical techniques. By the time a student enters high school, he has encountered music that represents a variety of quality. Discernment of the good from the bad is merely the over-all task; the fine distinction is the discrimination between the good and the mediocre. The development of this critical ability is an important part of the aims and objectives of the music teacher.

Regular classroom teachers may not have the specialized music training which would permit them to provide an in depth course of study in music. Therefore, the Philadelphia Board of Education has provided Music Specialist Teachers who are adequately trained in music and are capable of performing this specialized instruction.

This study will investigate the use of the Music Teacher Specialist to ascertain if the children will be affected in the following ways: appreciation of music; participation in musical performances; attendance at musical, cultural events; development of musical skills and literacy; and development of a positive self-concept.

REVIEW OF LITERATURE

Andrews and Leeder (1953), in speaking of a junior high school general music class, said: "The best source of center of interest comes from the pupils' experience. To start with his experience, deepen it, and direct it into some new channel is one of the important principles of modern education. This experience should be pupil-teacher planned. This planning develops cooperation of the highest type." Another statement on the same theme is presented by Bradford and Mial (1963), "Commitment is greater when people help define the objective."

Today's society has invested music with a missionary role. The disturbed student, the unwanted, the over-protected, the over-indulged find a haven in the music room. The therapeutic value of music is all potent. The good music teacher can make the modern child more aware of his deeper inner experiences so as to help him get along with himself. (S. E. Hughes, 1967).

In his study of adolescent society, Coleman (1961), canvassed over 4,000 young people as to leisure time activities. He found that extreme attachment to popular music and to cars may in some respects be a substitute for status and activities within the adolescent group itself. Both popular music and cars are important elements in the culture of young people.

Hanshumaker (1968), states that the music taught in today's schools must be music which requires the help of an experienced musician and teacher if it is to be understandable and have meaning. Toward this end we must teach the music itself, not merely manipulative skills or the birth and death dates of composers and their families. The music which is taught must be chosen for the help it provides in understanding an ever-changing modern world. The ultimate goal is to heighten aesthetic awareness and to provide a critical subjective basis for value judgment in the arts and thus to provide that same basis for value judgment in life.

For the vast majority of mankind, both the sick and the well, interpersonal relationships are second to no other influence in life. Man can never know himself without first knowing his fellowman. A person cannot become human without the group. (Montague, 1962). Music is often concerned with the positive relationships which draw man closer to his fellowman: love, loyalty, friendship, religion, to name a few. These are called the tender emotions. Nearly all music has to do with love in one or the other of its many manifestations--consider popular music, folk songs, religious music, art songs, opera and other types of music. Musical activity is a source of social cohesion. (Gaston, 1968).

Culligan (1968) said that the new innovations in the arts and the humanities promise a widening horizon for the students who will never attend college. By such means, America's schools can bridge the "seas of slovenly indifference," to connect the islands of excellence, "linking them into the broad highway of ideas on which civilization travels."

Schuckert and McDonald (1968) conducted a study to determine if controlled exposure to less preferred musical types would be instrumental in producing significant shifts in preference hierarchy. The sample consisted of twenty children, between the ages of four and six, who were attending the senior preschool and kindergarten classes at the University of Tennessee Nursery School.

The researcher used classical and jazz selections, two distinct types of music. Following four situations where music was played, in which each subject was systematically exposed to the less preferred musical type,

all subjects were retested for shifts in musical preference. While the magnitude of the preference shift was not found to be statistically significant, approximately one-half of the subjects were observed to shift preferences in the expected direction. Girls shifted preferences twice as often as boys and the ratio of musical preference shift following treatment was two to one in the direction of classical. No relationship was evident between the sex of the child and the direction of the preference shift.

Archibeque (1966), after studying children in the sixth grade, who have studied contemporary music, found:

1. Students prefer contemporary music to the music of earlier periods regardless of the study or lack of the study of contemporary music.
2. Students who had studied contemporary music indicated a greater preference for an experimental-type composition than students who had not studied contemporary music.
3. Students who had not studied contemporary music disliked the "Ballet Mecanique" significantly more than students who had studied contemporary music.
4. Girls who had not studied contemporary music liked the Copeland Symphony significantly more than boys who had not studied contemporary music.
5. Students who had studied contemporary music scored significantly higher on a test of musical understandings related to an unknown composition than students who had not studied contemporary music.
6. There was no evidence that previous musical training, attitude toward the musical class, or academic grades have any relationship to preference for contemporary music or understanding of it.

Summary. The studies reviewed seemed to indicate that an individual is better able to understand himself and the world around him when he comes under the influence of music. The studies also indicate that students who are exposed to the preferred societal musical types show significant shifts in their preference hierarchy. Also, exposure to preferred music raises the music achievement levels of students.

OBJECTIVES

1. To develop appreciation of music in children
2. To encourage children to participate in school glee clubs and group musical performances, and to perform musical acts individually

3. To increase student attendance at musical, cultural events
4. To develop musical literacy and skills in children
5. To aid in the development of a positive self concept in students

PROCEDURES

For the 1968-69 school year 22 Music Specialist Teachers will be assigned to 25 Public schools, and one to the parochial schools. These specialists are responsible for all the music education of their assigned classes.

Evaluation

H_{01} : There is no significant difference ($p < .10$) in appreciation of music between the control group and the experimental group as measured by the Music Appreciation Scale.

To test the statistical hypothesis a Student t-test will be used (Figure 1).

| Student t-test Music Instruction | |
|-------------------------------------|---------------------------------|
| Specialist (Experimental) | Classroom Teachers (Control) |
| X_{11} | X_{12} |
| X_{21} | X_{22} |
| X | X |
| X | X |
| X_{n_1} | X_{n_2} |

Cell data will consist of the mean scores derived from the instrument. The instrument that will be used will be the Music Appreciation Scale, administered as a post test.

H_{02} : There is no significant difference ($p < .10$) in student participation in musical performances between the control group as measured by the Music Activities Participation List.

The instrument used to test the hypothesis will be the Music Activities Participation List, administered as a pre-test and post-test. A Student t-test (Figure 2) will be the statistical technique utilized for analysis.

Student t-test
Music Instruction

| Specialist (Experimental) | Classroom Teacher (Control) |
|------------------------------|--------------------------------|
| X | X |
| X | X |
| X | X |
| . | . |
| . | . |
| X | X |

Figure 2.

Cell data will consist of mean differences scores (post-test minus pre-test) from the Music Activities Participation List.

H_{03} : There is no significant difference ($p < .10$) in student attendance at musical, cultural events between the control group and the experimental group as measured by the Music Activities Participation List.

To test the statistical hypothesis a Chi Square Analysis will be used, (Figure 3). Cell data will consist of the mean frequency of attendance scores derived from the instrument. The instrument used to test the hypothesis will be the Music Activities Participation List which will be administered as a post test only.

Chi Square
Music Instruction

| Specialist (Experimental) | Classroom Teacher (Control) |
|------------------------------|--------------------------------|
| f_{11} | f_{12} |
| f_{21} | f_{22} |
| . | . |
| . | . |
| f_{n_1} | f_{n_2} |

Figure 3.

H_{04} : There is no significant difference ($p < .10$) between mean scores of the experimental group and the control group, on the Philadelphia Music Aptitude Test, adjusted for pre-test differences.

To test the statistical hypothesis the Analysis of Covariance technique will be used (Figure 4). In this design the pre-test will serve as the covariate, while the post-test scores will be the dependent variable. The instrument used to test the hypothesis will be the Philadelphia Music Aptitude Test, administered as a pre-test and a post-test.

| Analysis of Covariance Music Instruction | |
|---|---------------------------------|
| Speccialist Experimental | Classroom Teachers (Control) |
| X,Y | X,Y |
| X,Y | X,Y |
| X,Y | X,Y |

Figure 4.

X = pre-test (covariate)

Y = post-test

H_{05} : There is no significant difference ($p < .10$) between the experimental group and the control group, in self-concept, adjusted for initial differences, as measured by the locally produced instrument, The Way I Feel About Myself.

To test the statistical hypothesis the Analysis of Covariance technique will be used (Figure 4). In this design the pre-test scores on the instrument will be used as the covariate while the post test scores will be the dependent variable. The instrument used to test the hypothesis will be The Way I Feel About Myself inventory administered as a pre-test and post test.

Instrumentation

1. Music Appreciation Scale
2. Music Activities Participation List
3. Philadelphia Music Aptitude Test
4. The Way I Feel About Myself Inventory

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COUNSELOR AIDES

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SUMMARY

Forty-one paraprofessionals, termed counselor-aides, have been added to high schools and junior high schools within the Philadelphia School District. The project objectives are to free the counselor from clerical and other duties which are not directly related to professional services; to have the guidance counselor meet with more students than he could with no aide; to have the guidance counselor spend more time with each counselee than he could without an aide.

To evaluate this program the researchers will randomly select two groups--counselors with and counselors without aides--and administer the Counselor Checklist as the criterion measure. After the data have been retrieved, they will be analyzed by the factorial analysis of variance and the chi square. The data involved include number of pupils contacted, time spent on counseling, and time spent on clerical tasks.

Schools to be included in this study are the following:

| | |
|------------|--------------------|
| Sayre | Bartram |
| Barratt | Wm. Penn |
| Bartlett | South Philadelphia |
| FitzSimons | Overbrook |
| Stetson | Dobbins |
| Harding | Edison |
| Cooke | Lincoln |
| Furness | Northeast |
| Masterman | Olney |
| Vare | Roxborough |

PROBLEM

Examinations of the counselor's role have indicated that routine clerical tasks associated with the position greatly limit time available for consultations with students. In order to relieve the counselor of such tasks, paraprofessionals have been appointed to serve as counselor-aides. The use of the counselor-aides should give the counselor more time for counseling, his main purpose. In addition to providing more and better services to more students, the change in the counselor's role should bring about increased job satisfaction which, in turn, should yield a more effective counselor.

REVIEW OF LITERATURE

Trained counselor aides may help the counseling process in two ways: first, by relieving the counselor of many time-consuming duties and thus freeing him to counsel; and second, by working directly with the children under the counselor's supervision.

Fifteen demonstration programs for training auxiliary school personnel were studied by Bank Street College of Education (1967) for the Office of Economic Opportunity in 1966-67.

Some major findings were the following:

- 1) When carefully selected, continuously trained, and appropriately placed, low-income auxiliaries with minimum prior schooling seemed capable of assisting directly in the learning-teaching process with benefit to pupils, teachers, administrators, home-school relations, and to the auxiliaries themselves as workers and persons.
- 2) Training--preferably team training of teachers and auxiliaries who would be or were working together--was seen as the essential to the effective use of auxiliaries.
- 3) Job definition was obviously necessary to set limits, but in the most successful programs such specifications were applied flexibly, to meet the needs of each learning situation.
- 4) Career development (assurance of stable employment, opportunity for advancement, and training at each step in the job sequence) was found to be least in evidence, although most crucial in school systems throughout the country.

The following activities are usually performed under the supervision of the school counselor or social worker. These activities were seen as particularly helpful in the schools where auxiliaries were used as follows in:

- 1) Visiting parents of children who are new to the school to welcome them to the school community.
- 2) Reporting to the counselor problems observed in home visits so that appropriate action may be taken.
- 3) Taking children to their homes when they become sick in school.
- 4) Talking with parents of children who have been absent or to such children and their parents together.
- 5) Working individually with a child who is too upset to remain in his own classroom and who is consequently sent to the counselor's office.
- 6) Helping to plan and organize parent meetings.
- 7) Talking with parents to find out how they feel about the school and reporting their reactions to a counselor.
- 8) Helping parents understand how children learn and grow, and relating this to children's homework.
- 9) Helping recruit and register pupils in the preschool program.
- 10) Answering the calls of parents and giving them information and referring them to the proper source.

Of all the auxiliaries employed in a school, relatively few are usually assigned to the guidance department. For example, of the 24 auxiliaries working in each school in the Berkeley demonstration project, only four were counselor assistants. They were selected from auxiliaries already working in the school who had shown most sensitivity to children's needs and had demonstrated their skills in working with pupils and communicating with parents.

The study team observed that a cadre of counselor-assistants permitted the guidance counselor increased mobility. It guaranteed that there would be a concerned and knowledgeable adult in the office at all times, to talk with a child who had been sent to the guidance office, to receive visitors, and answer the telephone. Since there was always at least one person in the office, the counselor could be reached in moments of crisis, even though the other three counselor assistants might be in the field, performing such functions as making home contacts, working with pupils in the "cooling off room," or escorting children to clinics.

Hansen (1967) examined the relationships among the job satisfactions and job activities of 168 school counselors. An intercorrelational matrix was developed using personnel data, eight job-satisfaction dimensions, and six job-activity areas. Establishing and maintaining staff relationships and providing guidance services to individual students were the activities most related to the job-satisfaction dimensions. Promoting the general program was not significantly related with any job satisfaction. Some differences between men and women counselors were found in both job satisfactions and activities. The student counselor ratio was relevant to the activities of the counselors but not related to their job satisfactions.

The American Personnel and Guidance Association (1965) takes the position that appropriately prepared support personnel, under the supervision of the counselors, can contribute to meeting counselee's needs by doing clerical work, and office tasks that take the counselor away from his primary duty, counseling. The appropriate use of such personnel will facilitate the work of the counselor and make the total endeavor more effective.

Recent federal legislation, creating greatly increased demands for personnel to provide relevant services, has resulted in the development of a new group of personnel positions which are variously referred to as auxiliary, technical, non-professional, para-professional, or support personnel. The concept of such positions is not new. It has been accepted by many professional groups. However, the systematic programming of support personnel roles is new in connection with work of the counselor.

The activities of support personnel differ from the work of the counselor in several basic respects:

1. The counselor performs the counseling function described by the professional policy statements, while support personnel may perform important and necessary activities that contribute to the overall service.
2. The work of the counselor involves synthesis and integration of interrelated parts of the total range of services with and in

behalf of the counselee, while the work of support personnel tends toward the particular and becomes an integral part of the larger whole only as this is developed under the leadership of the counselor.

3. The counselor bases his performance on the use of relevant theory, authoritative knowledge of effective procedures, and evaluation of the total endeavor while functions of support personnel are characterized by more limited theoretical background and specialization in one or more support functions. (The Personnel and Guidance Journal, author unknown, 1967)

Summary. The literature reveals the many ways in which an aide would be an asset to the field of counseling. As in other fields, where the professional is assisted by a paraprofessional, the professional is freed to perform his primary function because many secondary functions are handled by the aide.

OBJECTIVES

The objectives of the counselor-aide project are:

- a. To free the counselor from clerical and other duties which are not directly related to professional services.
- b. To have the guidance counselor meet with more students than he could with no aide.
- c. To have the guidance counselor spend more time with each counselee than he could without an aide.

PROCEDURES

Forty-one counselor-aides have been assigned to work with 193 counselors in the Philadelphia School District. Eighteen aides work with one hundred counselors at the high school level, and twenty-three aides work under ninety-three junior high school counselors.

Counselor-aides will assist counselors by acting as receptionists, by answering requests for routine information, by giving direct service on routine matters assigned by the counselors, and by performing clerical activities related to the counseling job. Through the use of the counselor aide, the counselor will be relieved of some parts of the job which can be carried out by a person without professional training so that the professionally trained counselor will be able to offer more intensive help to more disadvantaged children.

Evaluation. Counselors and aides in randomly selected junior and senior high schools will be considered in the evaluation. Eighteen aides in high schools serve an average of 5.55 counselors, while the nine

aides selected for the study serve an average of 5.22 counselors. The twenty-three junior high school aides serve an average of 4.04 counselors and the six selected aides serve an average of 4.17 counselors. Thus, each of the samples is representative, with respect to ratio of counselors-to-aides, of its population (see Appendix).

H_{01} : There are no significant ($p < .05$) differences between counselors without aides ($p < .05$) in time spent on duties not directly related to professional services, as measured by the counselor checklist.

To test this hypothesis the Counselor Checklist will be administered to the counselors in the sampled schools and to counselors without aides who have equivalent work loads. The checklist is to be used on three consecutive days to insure that the tasks which the counselors perform are not atypical. The instrument will provide the following data:

- a) percent of time spent on counseling.
- b) percent of time spent on other professional duties.
- c) percent of time spent on duties not directly related to professional services.
- d) number of pupils seen by the counselor.

The statistical technique for analysis of the hypothesis will be a factorial analysis of variance as pictured below. The dependent variable will be amount of counselor's time spent on duties not directly related to professional services.

| | Junior High School | High School |
|--------------------------|--------------------|-------------|
| Counselors with Aides | | |
| Counselors without Aides | | |

Figure 1.

Other hypotheses of interest will also be tested in this analysis:

H_{02} : There are no significant ($p < .05$) differences between junior and senior high school counselors in time spent on duties not directly related to professional services.

H_{03} : Interaction effect zero.

The results of this analysis will allow us to answer the following questions:

a. Do counselors having aides spend significantly less time on duties not directly related to professional services than counselors who do not have aides:

b. Do junior high school counselors spend significantly less time on duties not directly related to professional services than senior high school counselors?

c. Is there a particular combination of the factors aide-no aide and junior high school-senior high school which yields a significantly smaller percent of counselor time spent on duties not directly related to professional services than other combinations?

H_0 : There are no significant differences between counselors with aides and counselors without aides, in time spent on counseling as measured by the counselor checklist.

The Counselor Checklist will provide data for counselors' time spent on counseling. The statistical analysis will utilize the analysis of variance technique as pictured in Figure 1 with percent of time spent on counseling as the dependent variable. Other hypotheses of interest are:

H_0 : There are no significant ($p < .05$) differences between junior and senior high school counselors in time spent on counseling.

H_0 : Interaction effect zero.

Results of this analysis will allow us to answer the following questions:

a. Do counselors with aides spend significantly more time on counseling than counselors without aides?

b. Do junior high school counselors spend significantly less time on counseling than senior high school counselors?

c. Is there a particular combination of the factors aide-no aide and junior high school-senior high school which yields a significantly higher percent of counselors' time spent on counseling than other combinations?

H_0 : There are no significant ($p < .05$) differences between counselors with aides and counselors without aides in time spent on "other" professional duties, as measured by the Counselor Checklist.

The analysis technique will be the same as that described above. Other hypotheses under consideration include:

H_{08} : There are no significant ($p < .05$) differences between junior and senior high school counselors in time spent on "other" professional duties.

H_{09} : Interaction effect zero.

Data gathered for the number of pupils contacted will be analyzed by the chi square technique (see Figure 2). The hypothesis to be tested is:

H_{10} : There are no significant ($p < .05$) differences between counselors with aides and counselors without aides in the number pupils seen by the counselors.

The hypothesis will be tested at both junior and senior high school levels.

| Junior High School | | Senior High School | |
|-----------------------------|--------------------------------|-----------------------------|--------------------------------|
| Counselors with Aides | Counselors without Aides | Counselors with Aides | Counselors without Aides |
| f | f | f | f |
| f | f | f | f |
| . | . | . | . |
| . | . | . | . |
| . | . | . | . |

Figure 2

The second part of the evaluation of the counselor-aide project will deal with the ratio of counselors to aides. For each of the four sets of data gathered from the Counselor Checklist comparisons will be made between situations in which the ratio is below the average for the given population. The technique for analysis will be analysis of variance (see Figure 3) for each of the following dependent variables. Time spent on duties not directly related to professional services, time spent in counseling, and time spent on "other" professional duties. The data on the number of pupils seen will be treated statistically by the use of the chi square technique (Figure 4).

| | Junior High Counselors | Senior High Counselors |
|--|------------------------|------------------------|
| Counselor : Aide Ratio Above Population Mean | | |
| Counselor : Aide Ratio Below Population Mean | | |

Figure 3.

| Junior High School | | Senior High School | |
|--|--|--|--|
| Counselor : Aide Ratio Above Population Mean | Counselor : Aide Ratio Below Population Mean | Counselor : Aide Ratio Above Population Mean | Counselor : Aide Ratio Below Population Mean |
| f | f | f | f |
| f | f | f | f |
| . | . | . | . |
| . | . | . | . |
| . | . | . | . |

Figure 4.

Observations and interviews will be carried out periodically with counselors, aides, and principals in order to determine whether or not the project is being conducted according to the project description.

Instrumentation. The Counselor Checklist will be used to gather data on the activities of counselors with and without the addition of counselor-aides.

POPULATION AND SAMPLE

Counselor : Aide Ratios

Junior High School

Population Ratio -- 4.04 : 1
 Sample Ratio -- 4.17 : 1

Senior High School

Population Ratio -- 5.55 : 1
 Sample Ratio -- 5.22 : 1

| <u>No.</u> | <u>Selected Schools</u> | <u>Ratio</u> | <u>No.</u> | <u>Selected Schools</u> | <u>Ratio</u> |
|------------|-------------------------|--------------|------------|-------------------------|--------------|
| 110 | Sayre | 5 : 1 | 101 | Bartram | 7 : 1 |
| 211 | Barratt | 4 : 1 | 203 | Wm. Penn | 7 : 1 |
| 310 | Bartlett | 3 : 1 | 301 | South Philadelphia | 11 : 2 |
| 411 | FitzSimons | 5 : 1 | 402 | Overbrook | 8 : 1 |
| 512 | Stetson | 5 : 1 | | | 2 : 1 |
| 711 | Harding | 3 : 1 | 406 | Dobbins | 5 : 2 |
| | | | 502 | Edison | 7 : 1 |

Control Schools

| <u>No.</u> | <u>Junior High School Selected Schools</u> | <u>No.</u> | <u>Senior High School Selected Schools</u> |
|------------|--|------------|--|
| 710 | Cooke | 801 | Lincoln |
| 311 | Furness | 802 | Northeast |
| 214 | Masterman | 702 | Olney |
| 212 | Vare | 603 | Roxborough |

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ART SPECIALIST TEACHERS

Director: Mr. Bookbinder

Evaluator: Roger J. Fishman

Assistant: Robert Morgan

SUMMARY

Seventy-two Art Specialist Teachers serve elementary classes in seventy-two Title I schools in the Philadelphia School District. These teachers provide specialized art instruction for elementary schools in disadvantaged areas where there has been little opportunity for cultural enrichment. The project aims to give the children enjoyment and skill in art activities as well as to provide contact between the professional artist and the child.

The evaluation will consist of administering the following instruments to an experimental group and a control group, the Art Appreciation Test, the PPC Familiarity Scale, and the Student Attitude Toward School Inventory.

After the data has been retrieved it will be analyzed by the following techniques; a single classification analysis of covariance, a 2x2 factorial analysis of variance, and a t-test.

PROBLEM

According to Kathryn Bloom, director of the Arts and Humanities Program in the U. S. Office of Education, "The work of the innovators have shown that the arts can help educators reach and teach the deprived child, the arts can motivate and stimulate, and reinforce a child's sense of his own worth, and ultimately bring many poverty-damaged children back into the main-stream of education. I'm convinced this may be one of the most important keys in the history of education for unlocking the doors which shut the disadvantaged child out of our educational system."

In most 'compensatory education' programs around the country the arts--if represented at all--are provided on a hit-and-run, "cultural enrichment" basis: a concert one week, a museum visit the next. Since the arts are given a low academic status, educators generally fail to consider using painting, music, and theatre as classroom devices in instructional programs. Moreover, the Office of Economic Opportunity provides virtually no support for the arts in its community-action programs, preferring vocationally oriented training courses. Private foundations and state arts councils also show little interest. In the few cases where substantial money is available--as under Title I of the Elementary and Secondary Education Act--very few programs have been initiated involving the arts as teaching and learning tools.

Yet, the pragmatic evidence piles up, and successful pioneering projects strongly proclaim that there's educational gold in these hills. In response to this evidence, the Philadelphia, Board of Education has appointed Art Specialist Teachers to provide specialized instruction in art.

This study will investigate the use of the Art Specialist Teacher to ascertain, whether the pupil's ability in handling materials will be improved; if pupil's appreciation of art has been altered; if the child is familiar with the processes involved in the creation of fine arts through the media of printing and; if the child recognizes the relationship between printing and contemporary living.

REVIEW OF LITERATURE

Feldman (1963) has described art education as a discipline that acts upon the connection between art and life. He defined the art educator as a man who has subjective experience in depth in art that he reconciles with objective view points arising from the disciplines surrounding art (e.g., art history, anthropology, psychology, and sociology).

Murphy and Gross (1968), in a report to the U. S. Office of Education, reported many instances where the arts have raised the social levels of many deprived youngsters. Many educators, artists and others nation-wide have used the arts to interest and motivate deprived children. Appealing directly to the pupil's creative impulses apparently brings them to a point where they are ready to benefit from instruction in the three R's and the standard academic subjects.

McWhinnie's (1967) study investigated the effects of a specific type of perceptual training upon figure preference. The instructional program was designed to enable the subject to resist a set of simplicity-symmetry in favor of a set of complexity-asymmetry. The subjects in the experimental groups were given training in the manipulation of physical elements found by Hochberg (1960) to determine figure preference for complexity-asymmetry. Fourth grade classes from the Newhall California Schools were selected to participate in an eight week experiment dealing with perceptual training and alternative art experiences. The subjects within each class were assigned at random to the three experimental conditions: (a) perceptual training, (b) art, (c) control. The nature of the perceptual training used in this study necessitated that the learner perform visual tasks which were analytical in nature. The investigator concluded that the analytical character of the art learning program was more effective on boys than on girls in reference to the four selected art variables. One could therefore hypothesize that the art programs should be differentiated in order to account for the sex differences in perceptual behavior which were found in this study. The analytical character of perceptual learning seems to have had a greater effect on active behaviors than on passive behaviors. The results suggest that art appreciation behaviors will not necessarily be changed by art learning experiences which are totally directed towards the production of art. Art education programs have tended to be weighted heavily in favor of studio activities. These programs have purported to teach art appreciation. The data suggests that art programs need to become more differentiated with respect to either appreciation or skill.

Art educators tended to describe perceptual and/or aesthetic awareness as objectives of studio orientated art programs. The data indicates that these behaviors are very specific in nature. There is a need for specific criterion measures that will relate to the stated behaviors of a given art program.

School libraries have had the primary purpose of only housing books. Today at Lincolnwood's Lincoln Junior High School it is also used for staging art exhibitions. This art is provided to give pupils a variety of experiences in which each child will gradually form his own criteria of what is acceptable to him, develop standards of taste and judgement, have his imagination stimulated and his powers of observation sharpened. This should provide an excellent preparation for high school and college art courses. More important, it should create an awareness and appreciation which will permit the enjoyment of art throughout life. (Grigsby and Michaels, 1968).

The relationship between reading and art classes has been studied by Erikson and Thomas (1968). At University High School in St. Petersburg, Florida, the art teachers have accumulated written material on all phases of art. Whenever students asked a question, the teacher referred the student to a book. This meant that reluctant readers experienced the satisfaction of finding valued information and personal enjoyment within the covers of a book. Participants in these art classes showed improvement in reading skills on tests at the end of the year.

Katz's (1964) Communication Course, sponsored by the Carnegie Corporation, U. S. Office of Education and the state of North Carolina, was designed to meet the problem of educational underachievement in that state. The course used both the popular and the fine arts to "bring life into the classroom." Its aim was to interest students concerning relevant life problems. The course met such success that many teachers within the state adopted it and vowed "to never teach any other way again."

Summary. The reviewed studies indicate that the educational level of children can be raised when they are influenced by art. Exposure to preferred societal art will increase the child's appreciation of this type of art. Art will also aid in the improvement of the individual's self concept and attitude toward society.

OBJECTIVES

The Art Specialist Teachers Project has as its objectives;

- A. To improve the pupil's abilities in the handling of materials.
- B. To develop within each child an appreciation of art.
- C. To familiarize the child with the processes involved in the creation of fine arts through the media of printing.
- D. To improve attitudes toward learning.

PROCEDURES

Seventy-two Art Specialist Teachers serve elementary school classes in seventy-two Title I schools in the Philadelphia School District. Each teacher is assigned to work with specific classes by the school principal; however, each teacher will teach two morning and two afternoon classes each day for a total of twenty periods each week. These teachers provide specialized art teaching to elementary schools in disadvantaged areas where there has been little opportunity for cultural enrichment. The project aims to give the children enjoyment and skill in art activities as well as to provide contact between the professional artist and the child.

Evaluation. Samples of art from students who have and from students who have not been taught by Art Specialist Teachers will be collected and rated by Art Specialist Teachers other than those who have taught the subjects being used in the analysis. The rating will be done as both pre-test and post-test. If the pre-test data indicate that there are significant differences between the experimental and control groups adjustments will be made before the post-test data is analyzed.

H_{01} : There are no significant differences at the ($p < .10$) level between pupils who have worked with Art Specialist Teachers and those who have not worked with Art Specialist Teachers with respect to the ability to handle materials, as determined by the Art Specialist Teachers ratings of pupil art on the basis of technical skill.

To test this hypothesis the Mann-Whitney U Test will be used. This test is a non-parametric analogy of the t-test and may be used when the data is of an ordinal nature. The dependent variable will be the rank of the student's art work.

| Students Under Art Specialist Teachers (Experimental) | | | Students Not under Art Specialist Teachers (Control) | | |
|---|--------|------------------------------|--|--------|------------------------------|
| Student | Rating | Rank | Student | Rating | Rank |
| - - - | . | r_a | - - - | . | r_c |
| - - - | . | r_b | - - - | . | r_d |
| . | . | . | . | . | . |
| . | . | . | . | . | . |
| . | . | r_{n_1} | . | . | r_{n_2} |
| | | $R_1 = \sum_{i=1}^{n_1} r_i$ | | | $R_2 = \sum_{i=1}^{n_2} r_i$ |

FIGURE 1

Should the results of the statistical test be significant, we would reject the null hypothesis in favor of one of the alternative hypotheses:

H_{A_1} : Pupils having worked with Art Specialist Teachers handle materials with greater ability (as judged by Art Specialist ratings) than pupils who have worked with Art Specialist Teachers.

H_{A_2} : Pupils who have not worked with the Art Specialist Teachers handle materials with greater ability (as judged by Art Specialist ratings) than pupils who have worked with Art Specialist Teachers.

The Art Appreciation Test will be administered to randomly selected classes including both classes with Art Specialist Teachers and classes without Art Specialist Teachers.

H_0 : Students taught by the Art Specialist Teachers will have significantly greater ($p < .10$) appreciation of art, as measured by the Art Appreciation Test, than students who were not taught by Art Specialist Teachers.

| STUDENTS UNDER ART SPECIALIST TEACHERS | STUDENTS NOT UNDER ART SPECIALIST TEACHERS |
|---|---|
| X_{11} | X_{12} |
| X_{21} | X_{22} |
| . | . |
| . | . |
| X_{n_1} | X_{n_2} |

FIGURE 2

The design which will be used to test this hypothesis is pictured in Figure 2. The statistical technique is the t-test with scores on the Art Appreciation Test as measures of the dependent variable.

If the results of the analysis indicate that there are significant differences one of the following alternative hypotheses will be accepted:

H_{A_1} : Students who were taught by Art Specialist Teachers will have significantly higher scores on the Art Appreciation

Test than those who were not taught by Art Specialist Teachers.

H_{A2} : Students who were not taught by Art Specialist Teachers will have significantly higher scores on the Art Appreciation Test than those who were taught by Art Specialist Teachers.

Prints in Progress, a demonstration program provided by the Philadelphia Print Club, is the small group assembly portion of this project. Artists from the Print Club demonstrate silk screening, lithography, and other printing techniques.

H₀₃ : There will be no significant differences ($p < .10$) with respect to familiarity with printing techniques and the relationships of printing to contemporary living, as measured by the PPC Familiarity Scale.

| CLASSES WITH ART | | CLASSES WITH NO ART | |
|--------------------------------|----------|---------------------|---------|
| SPECIALIST TEACHERS | | SPECIALIST TEACHERS | |
| Prints in Progress | X_{11} | X_{12} | μ_3 |
| | X_{12} | X_{22} | |
| | . | . | |
| | . | . | |
| No Prints in Progress | . | . | μ_4 |
| | . | . | |
| | . | . | |
| | . | . | |
| μ_1 | | μ_2 | |

FIGURE 3

The design pictured above, a 2 X 2 factorial analysis of variance will be used to test the hypothesis. Cell data will be scores on the PPC Relationship Scale.

H₀₄ : Can be broken down as follows:
H_{0a} : μ₁ = μ₂
H_{0b} : μ₃ = μ₄

H_0 : Interaction effect zero.
c

Should H_0 be rejected, one of the following alternatives will be indicated:
a

H_{A_1} : Classes with Art Specialist Teachers, achieved significantly higher on the PPC Familiarity Scale than classes without Art Specialist Teachers.

H_{A_2} : Classes without Art Specialist Teachers, achieved significantly higher on the PPC Familiarity Scale than classes with Art Specialist Teachers.

Should H_0 be rejected, one of the following alternatives will be indicated:
b

H_{A_1} : Classes having participated in Prints in Progress achieved significantly higher on the PPC Familiarity Scale than classes that did not participate.

H_{A_2} : Classes that did not participate in Prints in Progress achieved significantly higher on the PPC Familiarity Scale than classes that did participate in the program.

Should H_0 be rejected, any main effects will have to be further interpreted. In addition, the cells which contributed to the significance of the interaction will be examined.

H_0 : There will be no significant differences ($p < .10$) between pupils having Art Specialist Teachers and pupils without Art Specialist Teachers with respect to attitude toward school, as measured by the Student Attitude Toward School Inventory.

The analysis will be a single classification analysis of covariance (Figure 4) with pre-test scores as the covariate and post-test scores as the dependent variables.

| CLASSES WITH ART SPECIALIST TEACHERS | | CLASSES WITHOUT ART SPECIALIST TEACHERS | |
|---|---|--|---|
| X | Y | X | Y |
| . | . | . | . |
| . | . | . | . |
| . | . | . | . |

FIGURE 4

Instrumentation

1. Art Appreciation Test
2. PPC Familiarity Scale
3. Student Attitude Toward School Inventory
4. Teacher ratings of student art samples.

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NEW STAFFING PATTERNS FOR
E I P SCHOOLS

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SUMMARY

In order to free the teacher from duties which can be performed by less skilled paraprofessionals, aides have been assigned to teachers in the Educational Improvement Program Schools. Such assistance in the classroom is thought to lead to more small group and individualized instruction. In addition, gains should occur for pupils in the areas of achievement and attitude. The evaluation is aimed at determining if there are differences among classes served by a full-time aide, half-time aide, and in classes having no aide. Grade levels one through five will be considered in this evaluation so that any longitudinal effects can be observed.

The consulting teacher's effectiveness will be examined through a questionnaire administered to classroom teachers. Another questionnaire for classroom aides will be used in the evaluation of the in-service seminars.

Statistical techniques involved in testing hypotheses of the project will include analysis of variance and covariance. Many of the instruments used will be locally produced and aimed at assessing the particular situations which develop in this project.

PROBLEM

Within the schools with a high concentration of disadvantaged children, there is a definite need for new instructional designs, a supplementary staff, and individualized instruction. These innovations are designed to close the educational gap between the disadvantaged students and those students in other areas which are considered to be advantaged.

Teachers in disadvantaged areas should spend most, if not all, of their time on professional duties. Because of the great number of clerical and housekeeping tasks which also must be accomplished, the teacher is not as effective as she could be if these routine tasks were accomplished by someone else. Another aspect of the problem is that of instructional techniques. In order to improve the educational level of students in disadvantaged areas, one must utilize methods that are particularly suited to the problems of students served. Assistance should be provided for the teacher in formulating instructional strategies and managerial procedures as well as in the testing and evaluation of her pupils.

REVIEW OF LITERATURE

Mac Farland (1966), in describing the Houston project, which was the first approved project in the nation under Title I, says:

A basic premise must be that every pupil - - no matter how forlorn or barren his background and futile his previous efforts toward achievement might have been - - has some talent, ability, aptitude, or interest that deserves to be developed.

Bank Street College of Education (1967) pointed out that there is a need for additional personnel in each school to provide for administration and supervision of special projects, made possible by federal funding, such as projects for the use of auxiliary personnel.

The Association for Supervision and Curriculum Development agreed that curriculum specialists, teacher consultants, curriculum leaders, and instructional leaders have all been used in the same sense as supervisor and curriculum director. (1965)

Harris (1963) stated that many new terms have been used as a substitute for "supervisor." One of these newer terms is that of curriculum assistant. Much of the professional literature reveals that the roles of the supervisor, instructional leader, coordinator or consultant are synonymous.

One means employed by many school systems to strengthen teaching and learning in deprived areas and to bring about greater gains in achievement is through the assistance of instructional specialists. Sweatman (1966) said that teachers and administrators must be made aware of ways of improving the quality of existing programs and adapting innovations on the basis of local needs.

Salatino (1966) believes that pupils in schools which follow newer and innovative practices are superior to children in the more conventional schools. Spodeck (1966) emphasizes that while a new program might not be suitable for all schools, it may prove more valuable than the traditional program for some children. In describing a program in cooperative teaching, Heathers (1965) pointed out that improving instruction depends strongly on change in curriculum and in teaching methods. Teachers, as well as pupils, can profit from the service of a specialist who cooperates closely with the principal and faculty. In bringing about overall pupil achievement, Berlin (1966) stated that for the child, each increment of learning, each integrative experience with an understanding adult, enhances the child's view of himself as a more effective person and potentiates his continued learning.

Witherow (1968) showed that the consulting teacher's function is to show the regular teacher how to prepare for each class, ways of motivating the pupils to excel, and how to eliminate teacher procrastination.

The specialists in the area of curriculum and instruction must make positive proposals for the establishment of organizational patterns which will release the full potential of all persons who are concerned with the educational process. (Babcock, 1965)

Instructional leaders with varying areas of specialization who together constitute a team are required for today's educational programs and for the needs of today's teachers with regard to their programs. Guidelines for the preparation and continued growth of instructional leaders based upon an analysis of present and projected required competencies are urgently needed. (Shafer and Mackenzie, 1965).

Classroom teachers are forced to spend much of their time on non-professional and clerical duties--tasks which could be handled by classroom aides. Park (1956), who originated the Bay City, Michigan, experiment found that the teachers spent 26 percent of their teaching time performing non-teaching activities. The conclusions of the Bay City School experiment reported by Wynn and DeRemer (1961) stated that teachers with teacher aides spent more time on instructional activities but that there was little objective evidence bearing on the comparative quality of instruction in the classrooms with teacher aides as opposed to that of those without teacher aides.

Cronin's (1959) review of the teacher aide experiences included the use of non-certificated laboratory assistants; lay personnel, both as laboratory assistants and as monitors in study halls; bus drivers as driver-training assistants; and secretaries, to handle assignments of several teachers each.

The National Commission on Teacher Education and Professional Standards (1966) indicated in their conference brochure that the use of teacher aides was one of the major emphases when attention was focused on the problems of the teachers.

Ferver (1966) requested information from a group of administrators who attended the National Conference on Educating the Disadvantaged. His summary of the information from the administrators indicated the following: there is a great and growing interest in the use of teacher aides throughout the country, probably brought about by ESEA and the Office of Economic Opportunity programs; the roles of aides should be clarified; most schools are liberalizing their use of aides; and experience in using aides is almost universally regarded as resulting in improved educational programs.

Both teachers and auxiliaries may develop a quality of relationship more pertinent to the child's needs when more than one concerned adult is present in the classroom. More small groupings and a wider range of activities are feasible in classrooms with aides than in situations where one adult is working all alone, often in an overcrowded classroom and with an overloaded schedule.

The auxiliary who lives in the child's own neighborhood often communicates with the child in a way that is neither threatening nor strange. He may help the child adjust to the unfamiliar world of the school and also interpret some aspects of his behavior to the teacher. The low-income auxiliary who has met and overcome some of the difficulties and frustrations the child now faces, says to the child by his presence in the school, "It can be done. You, too, can succeed here." (Bank Street College Of Education, 1967).

Summary. The studies indicate that with the establishment of an instructional team, comprised of consulting teacher, regular teacher, and classroom aide, the educational achievement of the pupils will be enhanced. Because of the team approach, each member of the team will have a specific function to perform and the freedom to perform it.

OBJECTIVES

The objectives for New Staffing Patterns for EIP Schools have been delineated as follows:

- A. To free the teacher from duties not directly related to professional services, as well as from some professional duties, so that she will be able to carry out more individualized and small group instruction than would otherwise be possible.
- B. To improve performance in English and mathematics.
- C. To provide, within the framework of the classroom, a climate which will be conducive to pupil participation, as measured by interaction analysis techniques.
- D. To develop within each child positive attitudes toward school and self.
- E. To provide effective professional assistance for teachers and aides.

PROCEDURES

One hundred teacher aides are assigned to teachers in grades one through six of Educational Improvement Program Schools for the 1968-69 school year. EIP schools are schools with a high concentration of disadvantaged children. The classroom aides will provide important supportive assistance by relieving teachers of most of the routine clerical and house-keeping duties which take time away from their teaching services. In addition by assisting the teacher with small groups and individuals, these paraprofessionals will permit the implementation of a more effective type of instructional program. The assignment of aides to teachers will vary among schools according to particular needs. In spite of this, there will be some consistencies in the ways that the aides are used. The following situation will occur:

- a) One aide will be assigned to one teacher,
- b) One aide will work with two teachers,
- c) One aide will serve three teachers, and
- d) There will be classes which do not have the use of aides.

Twenty-seven consulting teachers are assigned to EIP schools. These specialists will each serve approximately ten teachers by helping them to evolve more effective instructional techniques and classroom procedures.

In order to help the aides; with respect to their duties and their relationships with the school, principal, teacher, and children; in-service programs will be held throughout the school year. Each aide will participate in twenty-seven hours of in-servicing, which will be done on a seminar basis.

Evaluation. The Educational Improvement Program is now (1968-69) in effect through grade five in eleven schools which contain grades one through six. For this reason, the evaluation is being restricted to such schools and will be concerned with grades one, three, and five.

Within the selected schools aides were randomly assigned to teachers. The aide-to-teacher ratios are 0:1, 1:1, 1:2, and 1:3. The assignment scheme may be found in the appendix.

H_{01} : There are no significant differences ($p < .10$) between classes with and without teacher-aides in English and mathematics achievement, as measured by the Iowa Tests of Basic Skills (Grades 3 and 5) and the Stanford Achievement Test (Grade 1).

The designs for testing this hypothesis are pictured below.

| Classes with Aides | Classes with No Aides |
|--------------------|-----------------------|
| X,Y ,Y ,Y ,Y , | X,Y ,Y ,Y ,Y |

Figure 1. Multivariate Analysis of Covariance ($H_{01}^{Y_1, Y_2, Y_3, Y_4}$).

| Classes with Aides | Classes with No Aides |
|--------------------|-----------------------|
| X,Y | X,Y |

Figure 2. Analysis of Covariance.

Figure 1. portrays the scheme for analyzing H_0 (dependent variables Y_1 and Y_2), $H_{02}(Y_3)$, and $H_{03}(Y_4)$ in grade 1. The covariate for this design will be scores on the Philadelphia Readiness Test administered in May, 1968. If significant differences are found for the overall test of this design univariate analyses will be carried out as depicted in Figure 2.

Figure 2. shows the design for testing H_{01} in grades three and five. The covariate will be scores on the Stanford Achievement Test, for grade three, and the Iowa Tests of Basic Skills, for grade five, and the dependent variable will be scores from the Iowa Test of Basic Skills. The analyses will be carried out separately for English and mathematics.

H_{02} : There are no significant differences ($p < .10$) between classes with and classes without teacher-aides in attitude toward school, as measured by the Student Attitude Toward School Inventory.

H_{03} : There are no significant differences ($p < .10$) between classes with and classes without teacher-aides in self-concept, as measured by the locally produced instrument, The Way I Feel About Myself.

The testing of each of these hypotheses will be carried out as is indicated in Figure 2. For each hypothesis, and each grade, the covariate will be the pre-test and the dependent variable will be the post-test scores of the classes involved.

H_{04} : There are no significant differences ($p < .10$) between teachers with aides and teachers without aides in directness and rigidity, as measured by Flanders' Interaction Analysis.

Thirty-three classes, experimental and control, will be randomly selected for the testing of this hypothesis. Pre-testing will be carried out so that the teachers can be classified as either direct or indirect (revised I/D ratio) and so that the covariate can be obtained. The criterion measure will be the post-test data from the interaction analysis. The technique for analyzing this data is a factorial analysis of covariance (figure 2.).

| | Teachers with Aides | Teachers with No Aides |
|-------------------|---------------------|------------------------|
| Teachers Indirect | | |
| Teachers Direct | | |

Figure 3.

H_{05} : There is no significant difference ($p < .10$) between teachers with aides and teachers without aides in the amount of time spent on individual and small group instruction.

To test H_{05} questionnaires will be given to experimental and control teachers to determine the percentage of time spent on small group and individualized instruction. The difference between these percentages will be tested for significance by the z-test for the difference between two sample proportions.

Other aspects of the evaluation for the New Staffing Patterns for EIP Schools Project are the assessment of effectiveness of the consulting teacher, the examination of the various ratios of teachers to aides, and the determination of the value of in-service seminars for aides.

The Teacher Perception Reaction Scale will be administered to both teachers and aides to determine whether or not the consulting teacher has been effective in her role. The percent of favorable responses for each item will be tested to determine if it is significantly ($p < .10$) different from .50.

A questionnaire, to be developed locally, will be given to the aides to determine their response to the in-service seminars. The data will be treated as above.

In order to determine the most effective ratio of teachers to aides a multivariate analysis of covariance will be carried out. The design (Figure 4) has initial achievement as the covariate and self-concept, attitude toward school, English achievement, and mathematics achievement as the dependent measures.

| Classes with Full Time Aide | Classes with one-Half Time Aide | Classes with one-Third Time Aide | Classes with No Aide |
|-----------------------------|---------------------------------|----------------------------------|----------------------|
| X Y Y Y Y | X Y Y Y Y | X Y Y Y Y | X Y Y Y Y |
| | | | |
| | | | |
| | | | |

Figure 4.

With this analysis, the evaluation will be able to determine if there are any significant ($p < .10$) differences among classes having different aide assignments. If the overall test reveals this, post hoc comparisons will be made to determine which of the classifications and which of the variables are involved as well as the direction of the differences. Grades one, three, and five will be analyzed separately since there are a priori grounds for assuming that the best ratio of teachers to aides is constant across grade level.

Periodic observations and interviews will be carried out with aides, teachers, consulting teachers, and administrators as part of the monitoring process. By keeping in close contact with the project, the evaluators will be better able to interpret the results of analysis.

Date and Instrumentation. The following available instruments will be used in the evaluation of this project:

- a) Stanford Achievement Test, Primary I Battery
- b) Iowa Tests of Basic Skills
- c) Flanders' Interaction Analysis

In addition, the following will be revised or developed as needed:

- d) Teacher Perception Reaction Scale
- e) Studnet Attitude Toward School Inventory
- f) The Way I Feel About Myself
- g) In-Service Program Questionnaire
- h) Observation Checklist
- i) Teacher Questionnaire

SAMPLE INFORMATION

| | GRADE 1 | GRADE 3 | GRADE 5 | |
|--------------------------------------|-----------------------------|-----------------------------|-----------------------------|----|
| MC DANIEL District 2 #237 | 3 teachers with one aide | 3 teachers with one aide | 1 teacher with one aide | 7 |
| | 1 teacher with no aide | | 3 teachers with no aide | 4 |
| KEARNEY District 3 #330 | | 1 teacher with | 2 teachers with | 3 |
| | 3 teachers with no aide | 2 teachers with no aide | | 5 |
| NEBINGER District 3 #336 | 1 teacher with one aide | | 2 teachers with one aide | 5 |
| | 2 teachers with one aide | 2 teachers with no aide | | 2 |
| SOUTHWARK District 3 #341 | 2 teachers with one aide | 3 teachers with one aide | 3 teachers with one aide | 18 |
| | | 1 teacher with no aide | 3 teachers with no aide | 4 |
| STEVENS District 3 #343 | 1 teacher with one aide | 1 teacher with one aide | 3 teachers with one aide | 5 |
| | | | | 0 |
| WASHINGTON, G. District 3 #346 | 3 teachers with one aide | 3 teachers with one aide | 3 teachers with one aide | 9 |
| | | 1 teacher with no aide | | 1 |

| | GRADE 1 | | GRADE 3 | | GRADE 5 | | |
|------------------------------------|-----------------------------|-------|---|-------|--|-------|------------|
| WISTER, MC District 3 #347 | 3 teachers with one aide | | 2 teachers with one aide 2 teachers with no aide | | 2 teachers with one aide 1 teacher with no aide | | 7 3 |
| CHANDLER District 5 #551 | 1 teacher with no aide | | 2 teachers with one aide | | 1 teacher with no aide | | 2 2 |
| DOBSON District 6 #645 | 2 teachers with one aide | | 1 teacher with no aide | | 1 teacher with one aide 1 teacher with no aide | | 3 2 |
| T O T A L S T:A RATIO | Teachers | Aides | Teachers | Aides | Teachers | Aides | |
| 3:1 | 9 | 3 | 9 | 3 | 9 | 3 | 27 |
| 2:1 | 6 | 3 | 4 | 2 | 6 | 3 | 16 |
| 1:1 | 2 | 2 | 2 | 2 | 2 | 2 | 6 |
| 1:0 | 5 | | 9 | | 9 | | 23 |
| | <u>22</u> | | <u>24</u> | | <u>26</u> | | <u>72</u> |

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CLASS FOR THREE YEAR OLD DEAF CHILDREN

Director: Margaret McCormick

Evaluator: Charles Howard, Jr.

Assistant: Michael N. Harris

PROBLEM

Education of the normal pre-school child is filled with many complications: however, with the child's ability to hear and become familiar with the language spoken around him and, consequently, in learning to talk, the problems usually fall in the realm of those dealing with behavior. With the young deaf child, the situation is different. Oral communication cannot be reciprocal since the deaf child cannot hear and understand the spoken language of others and, as a result, he cannot learn to speak. (Harris)

REVIEW OF LITERATURE

The primary problems brought on by deafness itself magnify or create environmental and social problems, and the latter increase and magnify the former. (Harris)

As a result of these problems plus other factors such as lack of understanding on the part of parents and the community, the deaf child's educational process suffers a severe dropback. For example:

A child with normal hearing begins to speak by saying one-word-sentences; he goes on to phrases, and later to very simple sentences. He acquires mastery of speech during this development, slowly and happily. A deaf child is older when he begins this process, but he should go through the same stages as the normal child, with a great deal of practice in each stage. In this way, his speech development will be a happy and natural thing.

Consequently, the earlier the deaf child is exposed to training in language learning and learning to talk, the smaller the education gap will be between him and his contemporary who is normal. Sir Alexander Ewing and Lady Ethel C. Ewing feel that it is possible for the deaf child to learn to talk by an age of three to four years. (Ewing and Ewing)

As with all young children, the pre-school deaf child needs to be around other children in education. However, he may be rejected by a school with hearing teachers "on the basis of objections by the hearing children's parents, through lack of understanding on the part of the educators." (Harris)

The solution to this problem, therefore, is to place the young deaf children in an educational environment with other children where he is accepted.

Parental involvement with the education of the pre-school deaf is very important, also. The response of the parent (s) toward his child will reflect in the behavior of the child.

The hard of hearing can understand and use speech and language having learned them through the sense of hearing. The deaf, however, have not learned to communicate through the sense of hearing because their disability occurred very early in life and (before language development) was severe.

A person may be born deaf, or, he may lose his hearing ability as time progresses. The person who has become deaf after years of being able to hear has the benefit of having learned to communicate and, thus having the ability to communicate after deafness has occurred. The person born deaf or one who becomes deaf in the infant years of his life has a special and more difficult problem for he has not had all the facilities necessary to learn to communicate and must be taught this. Although this area has received a great deal of attention for many years, much progress still has yet to be made.

The problem of providing the congenitally deaf child with a means of communication has received much attention for very many years. Yet there is still profound dissatisfaction with the results (Perry Robinson, 1958) and no method of training has been clearly proved to be the best. The two main methods have been the manual and the oral. The manual method depends on the use of signs for communication....The oral method has aimed at teaching the child to speak and to understand speech in others by means of lip reading. (Whetnall and Fry)

At the Western New York Institution at Rochester, Dr. Zenas Freeman Westervelt developed a method that combines the manual alphabet and speech but excludes signs. (Streng)

Dr. George S. Haspiel, Assistant Director of the Speech and Hearing Clinic and The Pennsylvania State University used the oral method and published in 1964 A Synthetic Approach to Lip Reading. This is a manual constructed for the grade school age child consisting of twenty-four primary lessons and twenty intermediate lessons.

One of the first accounts of the education of the deaf was of the success of St. John of Beverly in teaching a deaf mute to speak in about the year 700 A.D. Later ideas were expressed in the 16th century by Jerome Cardan of Pavia, and Pedro Ponce, a Benedictine monk. In the 17th century Spanish monk, Juan Paulo Bonet, a Dr. John Bulwer, an Englishman, and Scotsman, George Dalgarno published books on the teaching of the deaf. In 1793, Thomas Braidwood founded the Asylum for the Deaf and Dumb in London. The first attempt to educate the deaf in the United States was at Rowley, Massachusetts, in 1679. In the 19th century more work was done by John Stanford, John Braidwood, Alice Cogswell, Rev. Thomas H. Gallaudet, Alexander Melville Bell, and Alexander Graham Bell. These people set the foundations for the present day education of the deaf. (Moore)

Dr. Benjamin Spock and Dr. Marion O. Lerrigo advocate the early training of the deaf child.

Children who have been deaf or hard-of-hearing since infancy will benefit particularly from early training in speech development, lip reading, and the use of a hearing aid. The natural years for the development of speech and language are the pre-school years, and if the child doesn't lay the foundation then, it will be much harder for him later. (Spock and Lerrige)

They further stated that if the facilities for educating the young deaf children are available in the community, the child "might benefit by attendance as early as two-and-a-half or three." However, if the school is a residential one and the child must leave home to attend, then four is the minimum age recommended. However, the school used in this study is not a residential one and children as young as three years participate.

Clearly, then, the resolution is to provide an educational establishment in which children would be made to feel accepted and would learn to communicate, one in which they would be around other children, and one in which parental participation would be encouraged. The Three Year Old Deaf Children Project is designed to accomplish these ends as early as possible in the young deaf child's learning experience.

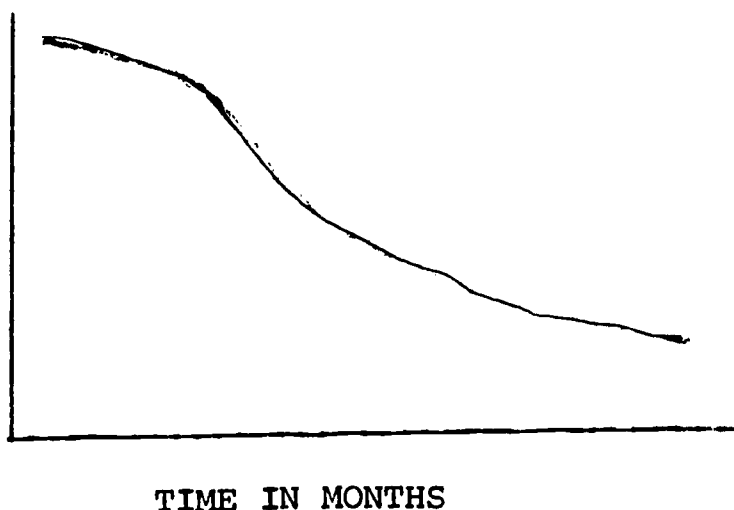
OBJECTIVES

1. To develop the three year old deaf child's understanding of spoken language to the extent that he can respond appropriately to spoken words.
2. To develop the three year old deaf child's skill in anatomically manipulating his speech organs necessary to pronounce distinct words.
3. To enable the three year old deaf child to differentiate various lip configurations to the extent that he can produce the corresponding word sounds.
4. To enable three year deaf children to use all their residual hearing as measured by the teachers knowledge and experience with the children.

Hypotheses

1. The three year old deaf children will exhibit, over a period of time, a continually increasing frequency of correct behavioral response to the spoken words.

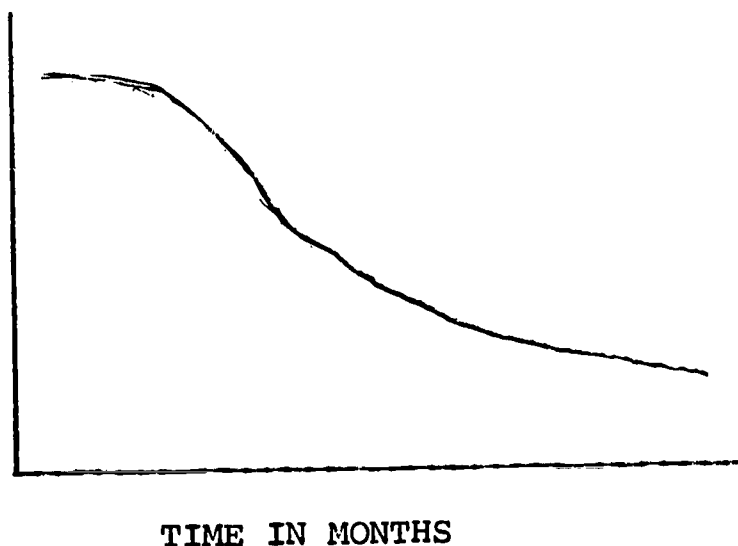
%
Frequency
of
Correct
Responses



Frequency of
behavioral
response as a
function of
directions to
perform speci-
fied tasks.

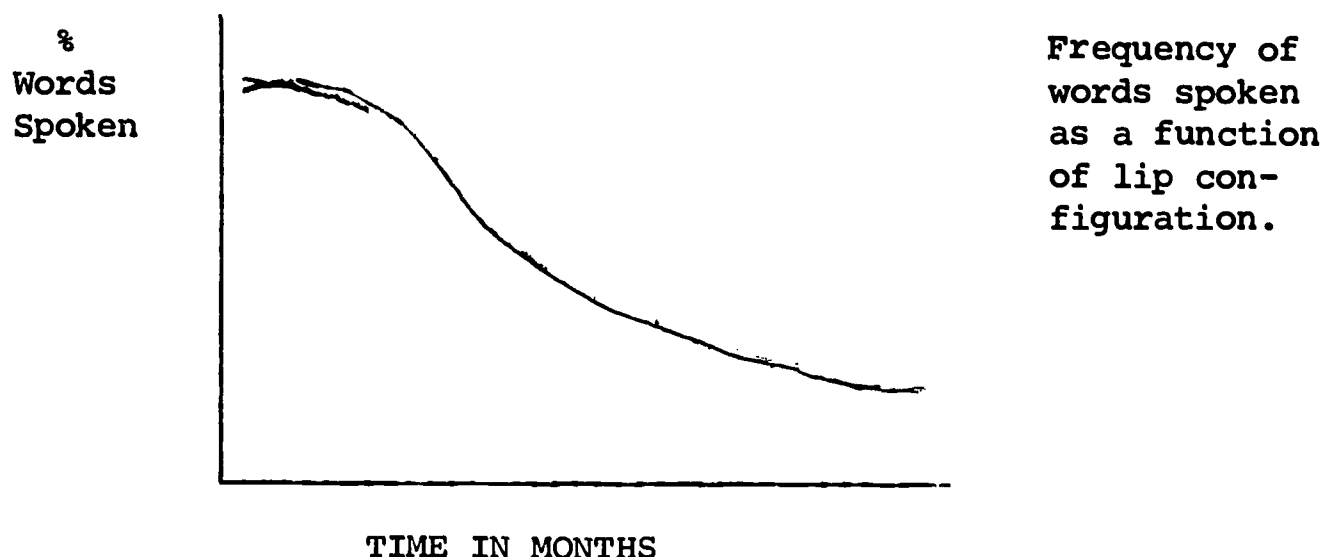
2. The three year old deaf children will exhibit, over a period of time, a continually increasing frequency of distinctively pronounced words.

%
Words
Pronounced



Frequency words
pronounced as
function of
learning to use
speech organs.

3. The three year old deaf children will, over a period of time, learn to differentiate lip configurations to the extent that they will, with increasing frequency, speak the word corresponding to the lip configuration.



4. The three year old deaf children will exhibit, over a period of time, increasing use of residual hearing as can be determined by the teacher's experience and observations.

Information Required

1. The frequencies of correct response to spoken commands.
2. The frequencies of distinctively pronounced words.
3. The frequencies of correct assessment of lip configuration.
4. The extent to which residual hearing is being used.

Design

The subjects are the 8 three year old children participating in the Title I funded class for three year old deaf children. To the extent possible, these 8 children will not, for various reasons, participate in the program.

To analyze the significance of any observed differences, a χ^2 analyses will be performed on the frequencies of the various behavioral indices. To do this and, assuming at this point that a control group may not be available, it is necessary to assume that had the children not participated in the program that no learning would have occurred other than learning resulting from maturation. Also, that learning as a function of maturation is minimal because of gross deficits in hearing. Therefore, it is feasible to assume that learning over a 6 to 9 month period for three year deaf children could be represented, graphically, by a horizontal line with little if no slope, as indicated by the dashed lines above. The expected growth due to the input of the classroom activities can therefore be represented by another curve, showing a gradually accelerating slope. This curve, if empirically observed, will confirm the stated hypotheses.

The χ^2 analysis will take the form shown below.

| | | | | | | |
|----------|--------------|--------------|--------------|--------------|--------------|--------------|
| Observed | ΣX_1 | ΣX_2 | ΣX_3 | ΣX_4 | ΣX_5 | ΣX_6 |
| Expected | ΣY_1 | ΣY_2 | ΣY_3 | ΣY_4 | ΣY_5 | ΣY_6 |

The same design will be employed with or without a control group. The difference will be in terms of the expected frequencies. If a control group is used, it will provide the expected frequencies. If a control group is not used, the expected frequencies will be assumed constant with equal frequencies in each cell.

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GERMANTOWN AREA SCHOOLS

Director: Mrs. Raymond Berkowitz

Evaluator: Charles Howard, Jr.

Assistant: Michael N. Harris

PROBLEM

Providing curricula and experiences relevant to the needs of urban children is the problem. There is a need, notwithstanding the traditional educational needs, to make the formal school experience more and more meaningful as well as pertinent to the daily lives of urban children. For example, in our highly mobile and changing society, knowledge of various institutions and resources available in the community is priceless information when needed. Also, children need to be unbiasedly aware of other groups of people whose experiences differ from their own. These problems may be resolved by projects such as The Germantown Area Schools Project.

REVIEW OF LITERATURE

An editor of a newspaper in the South once presented the following little thought to his readers:

We live in a time
When cotton has gone west
Cattle have gone east,
Yankees have gone south
Negroes have gone north,
And we've all gone to town!

This little bit of prose illustrates the tremendous change that has taken place in this society. In the nineteenth century, a man's muscles were important to the productivity of an economy. Now machines have been constructed to do what formerly was the work of men. A little over 100 years ago slavery was an established practice in this country. Now children of all races, creeds, and colors attend the same educational institutions, wear the same clothes, and have almost the same opportunities in employment and other aspects of this society. Years ago space exploits were limited to "Flash Gordon" and other such cartoons; now the sending of astronauts into space is almost common-place.

These and other changes in our society greatly affect the role of education; for in order to educate students adequately and accurately, educational institutions and the curricula must adjust accordingly. Robert Havighurst wrote:

Education operates in a social situation which conditions its aims and methods. With this society and other societies of the word changing constantly, education must be relevant to the students' lives. Charles G. Spiegler advocates that teachers' abandoning the "prescribed book lists and rigid old formulas for book reports" and to select books that "hit" the student "where he lives." Such a plan would make students more knowledgeable about their environment.

There must definitely be in the realm of education interaction between the community and the schools.

Sam P. Kelly suggests a reciprocal flow of information between the community and school board, thus allowing each segment to be informed about the other.

Whenever innovations are made in education, the public "must have an increasing understanding of this process of change in his own way of living, in the business world about them, and for its implications in education."

The problem of education, especially in the realm of Social Studies, would be to "remold" curricula and methods of teaching so that they would make the school experiences more relevant for the student. The achievement of this is the goal of the "Germantown Area Schools Project."

OBJECTIVES

1. To develop, through interpersonal relationships, discussions and involvement in community affairs, greater "openmindedness" toward people with different ethnic experiences.
2. To increase the students' knowledge about various institutions, resources, organizations, political dogma, etc., in Germantown.
3. To provide the Germantown Area Schools Project with the proposed Do-In, Project Teach-In, Science Teaching Assistant, Urban Studies and Development, Independent Research in Urban Problems, The World Today Discussions, Contemporary Literature, Music Appreciation, Coping, Expression-Sensitivity-Project, and Human Relations Studies.

Hypotheses

1. The Germantown Area School Project participants will demonstrate greater "openmindedness" toward groups of people with different ethnic experiences over a period of time to the extent that there will be statistical ($p < .05$) significant differences between pre and post questionnaire mean scores, and over a control group.
2. The Germantown Area Schools Project participants will demonstrate over a period of time, increased knowledge of Germantown to the extent that there will be statistical ($p < .05$) significant differences between pre and post questionnaire mean scores, and over a control group.

3. There will not be statistical significant differences between the proposed program activities and the activities observed.

Information Required

1. Pre and post "Openmindedness" indices.
2. Pre and post "Knowledge of Germantown" indices.
3. The extent to which the various project processes are being conducted as proposed.

PROCEDURES

The sample consists of all the students participating in the Germantown Area Schools Project. These students will be administered pre and post test questionnaires, and statistical comparisons made with a control group of subjects not participating in the program.

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PRIMESITE

Director: William Macomber

Evaluator: Charles Howard, Jr.

Assistant: Michael N. Harris

PROBLEM

Maintaining an adequate number of able teachers in the Philadelphia schools is a severe problem primarily because the inner-city schools which serve the disadvantaged population are difficult and professionally frustrating for teachers. Of a total teaching staff of 10,112, about 1,030 are classified as "long-term substitutes" because they do not meet state certification standards or otherwise qualify for regular employment in the school system. Most of these substitutes, almost 60 percent, work in the inner-city schools.

Of the 1964-65 Philadelphia public school enrollment of about 270,000 best estimates are that at least 40 percent could be classified as being "socially disadvantaged."

(The term "socially disadvantaged" is used throughout to identify children whose socio-economic circumstances are depressed, and who, as a consequence of the deprivations which accrue from these lacks, are at a disadvantage in a society whose characteristic cultural norms are richer and more sophisticated.)

Though the overall dropout rate for the school system is 27 percent, the dropout rate among the students who are socially disadvantaged is estimated by school officials to be at least 55 percent.

Attracting and keeping able teachers for the inner-city schools have been and are urgent needs in Philadelphia, as they are in the other great cities. It is the special nature of the teacher staffing problem in the school systems of the great cities-and in many other somewhat small ones-that their pupil populations require teachers who can succeed with children who are socially disadvantaged, and it is precisely these teachers who are in the shortest supply.

The fact that there are special difficulties in dealing with such children is well-known to those who are trying to do the job. It is clear that the socially disadvantaged child is alienated from school at a cumulative rate. He learns poorly from the beginning, and as his academic deficits mount, his inadequacies make learning at the school's graded rate more and more improbable. He rejects his failures in a variety of unacceptable in-and-out-of-school behaviors even as the school rejects him as a learner. The termination of his school experience is often a mutual relief from deeply disturbing tensions.

Lack of success in accomplishing valid educational purposes with so many socially disadvantaged children discourages school officials, delimits the aspirations of the staff, and reduces teacher supply by encouraging some to leave and disenchanting potential new applicants. Any strategy for increasing teacher supply in the great cities must be predicated on increasing the probability of successful instruction of the socially disadvantaged child.

It is posited that successful instruction is not only the teacher's responsibility, that any effort to increase the probability of teacher satisfaction merely by preparing teachers in some better way is likely to be insufficient. The teaching program in the elementary school must also be modified to increase the probability that academic gains will characterize the experience of children who attend the inner-city elementary schools. If teachers can be prepared so as to be able to teach socially disadvantaged children more effectively, and if the school program can be designed to increase the probability of worthwhile achievement by pupils, then some deliberate curricular effort to improve the ability of these children to cope with the school's expectations becomes more realistic.

There are three elements in the proposed demonstration: an improved school program, a teacher preparation program designed to enable teachers to succeed with that curriculum, and a tactic of deliberate, structured instruction in developing the in-school coping behavior of socially disadvantaged children. The key to the strategy of the total project, successful teaching experience, is specialization of effort in each of the three aspects rather than simply in improving the teacher education program. The school, as well as the teacher, must adapt to cope the problems of teaching pupils who do not fit the norms of the majority.

The problem central to this demonstration is to break the chain of pupil failure deriving from original deprivation and further deprivation deriving from educational failure by providing conditions of teacher preparation and pupil instruction that will lead to successful educational experience for both teacher and pupil. The purpose central to the demonstration is to test and evaluate a strategy for providing a successful teaching experience for beginning teachers in the inner-city elementary schools of Philadelphia.

REVIEW OF LITERATURE

In 1954, when the Supreme Court stated the unconstitutionality of segregation in public schools, many school systems became more and more acutely aware of the many socio-economic problems that were brought into the classroom. Such problems made it increasingly difficult to carry on regular classroom teaching in the accustomed fashion. The school system of Wilmington, Delaware was typical of the school systems in the country. (Crosby)

Among the problems faced by the classroom teachers were:

1. Increasingly heavy demands for social welfare services which the schools attempted to meet.
2. Aggressive behavior resulting in much fighting.

3. Lack of experiences on the part of children which the school counted on to establish a readiness for academic learning.
4. Inability to communicate with the teacher through languages.

A Three-Year Experimental Project on Schools in Changing Neighborhoods was initiated and organized to provide for two inter-meshing strands of development:

1. The school-centered strand-the in-service education of the staff.
 - a. Effecting a change of attitudes from one of rejection or tolerance to one of acceptance, support, and identification with disadvantaged children.
 - b. Learning new approaches and techniques in diagnosing the human-relations needs of children.
 - c. Acquiring skill in building curriculum experience units based on children's perceptions of their needs.
2. The community strand-co-ordination of efforts and services of agencies, organizations, and lay people.

Among the challenges which appeared in educating the economically deprived child were:

1. Inability to command the use of informal standard English.
2. Inability to overcome a self-image that blights potential.

The Wilmington situation was not a unique typical situation which many school systems faced. Several studies were made on the aspects of educating these children who were deprived of the socio-economic attitudes which were necessary for the learning process. Many explored the early childhood years before and in the early years of elementary school.

Brunner brought out the importance of pre-school experiences in the educational realm. At this level the child formulates his self-concept language formation, name identification, and the formulation of values. According to Brunner, early deprivation "robs" the organism of the opportunity of constructing models of the environment, and it also prevents the development of efficient strategies for evaluating information. (Brunner) She also brought out some other important aspects of educating the deprived child.

The development of a positive self-concept on the part of each child is an important consideration for a program of early childhood education. p. 153.

The development of habits of cleanliness, the care of property, and the nurturing of physical development are concerns of the educational program.

"The need to communicate is basic to learning and to relating to others. Therefore, it permeates the entire instructional program." p. 156.

"Music, art, and literature add joy and beauty to life and add new dimensions to the environment." p. 157.

"Through a wide variety of experiences, children develop an awareness of the world around them." p. 158.

"Quantitative thinking is a natural and necessary part of many experiences." p. 159.

"Self-selected activities are means of expressing preferences and of pursuing special interests." p. 160.

"Careful planning of learning activities does not prelude the use of learning situations arising in the classroom." p. 160

Not only are these areas important in the learning process, but the readiness of the children is very important also.

Consideration for readiness does not mean that teachers just stand by and let children become ready, however. Rather, it means that the school provides children with many experiences that help them understand their world. (Lambert)

In readying a child for learning, the idea is not to eliminate the individual differences, but rather to increase them through the opportunity of learning to the fullest extent of each child's capacities.

Studies by such researchers as Albert Harris, Silberstein, Sewer, Martin Deutsh have indicated the need for reading readiness at any early age. The McCanne Project have both shown that by employing certain methods, the disadvantaged child is able to significantly raise his reading level in the early stages of the educational process. (Harris)

Books and motion pictures (such as "To Sir With Love" and "Up the Down Staircase") have depicted the problem of teachers when they are initiated into the teaching of disadvantaged children. Researchers like Elizabeth M. Eddy have explored this problem and its importance especially with regards to the new or beginning teacher. She stresses the importance of preparing teachers for this experience not only with regards to the new or beginning teacher. She stresses the importance of preparing teachers for his experience not only with regards to the training or education of the teacher, but also with accompanying changes by the school itself.

This will enable the teacher to understand better the role which she must play. Further, Miss Eddy speaks of the importance of not changing the teacher's attitudes and techniques which might result in the teacher's overlooking the social context from which her students come, but for preparing the teacher in a manner in which the attributes of the teacher and those of the students might find some meaning through inter-action in this social environment. (Harris)

The Primesite project was initiated to provide just such a social environmental inter-action.

OBJECTIVES

This year's objectives are in three basic areas, improving reading, improving coping, and training teachers.

Reading

To substantially increase student's reading levels by meeting individual reading needs; with special emphasis on word recognition and reading comprehension

1. To meet the student's individual reading needs through specialized personnel, materials, and smaller than normal classes.
2. To improve the student's ability to visually identify the groupings of word syllables such that the pronunciation and meaning is readily differentiated, to the extent that pre and post tests mean scores will show statistical significant differences.
3. To improve reading comprehension to the extent that pre and post tests mean scores will show statistical significant differences.

Coping

To provide students the necessary atmosphere conducive to developing the skills required to effectively cope with learning institutions and their personnel.

1. To facilitate the student's cognitive development (learning) to augment their need to achieve academically.
2. To improve the student's self-image to the extent required to show statistical significance between pre and post tests mean scores.

3. To improve the student's ability to adjust to, and relate effectively with people in an educational environment.

Staff Development

1. To provide teachers, better prepared and more competent to meet the teaching needs of target area underachieving students.

To determine the extent to which proposed program procedures are being applied, an assessment of project process will also be included.

Hypotheses

1. The experimental group will show statistically ($p < .05$) significant general reading gains from the pretest to the post tests and over the control group.
2. The experimental group will show statistically ($p < .05$) significant word recognition gains from the pretest to the post tests and over the control group.
3. The experimental group will show statistically ($p < .05$) significant gains in reading comprehension from the pretests to the post tests and over the control group.
4. The experimental group of teachers will show statistically ($p < .05$) significant different questionnaire responses on coping when compared to a control group.
5. The experimental group will show statistically ($p < .05$) significant gains in positive responses about self and their relationship to the environment from the pretests to the post tests and over the control group.
6. The experimental group will show statistically ($p < .05$) significant gains in adjustment and effective interpersonal relations from the pretests to the post tests and over a control group.
7. The experimental group of trained teachers will show statistically ($p < .05$) significant ratings on competence and teacher preparation to teach disadvantaged students when compared to a control group.
8. There will not be statistical significant ($p < .05$) differences between the program procedures and those applied.

The information required to determine if objectives have been met is listed below. A number of tests and questionnaires have been proposed, but none have been selected at this writing. The Department's test specialist is now determining the feasibility of the various instruments that are available or should be developed. Therefore, the instruments to be employed in this study will be provided at a later date.

Information Required

- I. 1. The degree to which smaller classes exist.
2. The degree to which reading assessments are utilized.
3. The degree to which specialized personnel are available and utilized.
- II. 1. The degree to which words are recognized.
2. The degree to which words are pronounced.
3. The degree to which words are discriminated.
- III. 1. The degree to which reading is comprehended.
- IV. 1. The degree to which students are coping with their school environment.
- V. 1. The degree to which students respond positively about self; their relationship to the environment.
- VI. 1. The degree to which students are adjusting to school environment.
2. The degree to which students relate effectively to others in the school environment.
- VII. 1. The degree to which Primesite trained teachers are prepared to teach disadvantaged students.
2. The degree to which Primesite trained teachers are competent in teaching disadvantaged students.
- VIII. 1. The degree to which the proposed program procedures are being applied.

PROCEDURES

The experimental procedure for phase one output variables will be conducted as follows:

The subjects will consist of all the students from pre-kindergarten through the fourth grade at Dunbar Elementary School. Listed below is the expected participant grade level and number.

| | |
|------------------|-----|
| pre-kindergarten | 30 |
| kindergarten | 100 |
| grade 1-3 | 315 |
| grade 4 | 75 |

The Dunbar School was selected as the Primesite experimental school because of its proximity to Temple University and its pupils meet the criteria necessary to designate it a school of disadvantaged children. Therefore no sampling is required.

To evaluate phase I of the program a pre-post test design with a control group will be utilized.

To evaluate phase II of the program, supervisory ratings will be the measure of degree of success or failure. Teachers who participated in the training program during their junior and senior years and who are now teaching in the school system will be compared with comparable new teachers who did not participate in the training program and who are also now teaching in the Philadelphia school system. This comparable group comparison will be conducted via supervisory ratings of competency and preparation. A questionnaire will be developed to assess their attitudes about teaching disadvantaged students.

The experimental group will consist of those new teachers trained in Primesite to teach underachieving pupils. As of last Spring, there were 27 such persons. The control group will be selected from Temple's June graduating class who are also teaching this school year.

To obtain these ratings, two groups of supervisors must be employed because the experimental subjects have been assigned special supervisors. This was necessary to implement the program as proposed. The control group ratings will be supplied by regular school supervisors. Because of the above-stated conditions, it is impossible to control all relevant variables known to effect subjective rating techniques.

To evaluate the third phase of the program, it will be necessary to monitor the project. A predesigned checklist along with appropriate interview schedules will be developed to assess the process in operation. The checklist will allow a monitor to check the activity taking place, and the duration and intensity of that activity. The monitoring checklist will be developed when the curriculum has been precisely specified. The interview schedule is being developed by our tests specialist.

Statistical Analyses

Phase I-Output variable will be analyzed via a 2X2X4 analysis of variance design. See design attached. This design has been approved by our design specialist.

Phase II-The supervisory ratings of teachers will be analyzed via the Mann-Whitney U Test, which is nonparametric and is appropriate for ordinal scale data. This statistical test is subject to change, pending the nature of the supervisory rating scale which is standardized in the Philadelphia school system.

Phase III-The Process Reporting analytical technique will be selected after the measuring instrument has been developed.

| | | EXPERIMENTAL GROUP | | CONTROL GROUP | |
|--------------|------------------|---|------------|--------------------------|------------|
| | | Pre Tests | Post Tests | Pre Tests | Post Tests |
| GRADE LEVELS | PREKINDER-GARTEN | Change in Behavior | | | |
| | | 4. Cognitive Develop 5. Self-Image 6. Human Relations | Form B | Selected Tests Form A | Form B |
| | KINDER-GARTEN | 1. Reading (Phila. Readiness Tests) 4. Cognitive Develop 5. Self-Image 6. Human Relations | | | |
| | GRADES 1-3 | 1. Word Perception 2. Comprehension 3. Meeting Individual need 4. Cognitive Decelop 5. Self-Image 6. Human Relations | | | |
| | GRADE 4 | 1. Word Perception 2. Comprehension 3. Meeting Individual need 4. Cognitive Develop 5. Self-Image 6. Human Relations | | | |

PHASE II

| SUPERVISORY RATING | | |
|--------------------|------------|-------------|
| | Competency | Preparation |
| Experimental Group | | |
| Control Group | | |

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CLASS FOR MENTALLY RETARDED - EMOTIONALLY DISTURBED CHILDREN

Director: Dr. Jerry G. Miller

Evaluator: Charles Howard, Jr.

Assistant: Michael N. Harris

PROBLEM

The major problem is how to meet the educational needs of retarded and emotionally disturbed children. Also to be kept in mind is the relative cost and the effectiveness of such education. A subordinate problem is how to provide effective training and counseling to the parents of these children so that parents can better understand and cope with their childrens' enormous needs.

REVIEW OF LITERATURE

In the realm of education there are students who are termed mentally retarded. Dr. Max G. Frankel and associates list some deficiencies commonly found in retarded children:

Apathy.

Impulsiveness-lack of behavior control, hyperactivity
Emotional instability-irritability, fluctuation of mood.

Distractibility.

Low stamina-fatigued easily.
Motor disabilities-spasticity, palsy, crippling.
Over-dependence upon others.

Lack of Curiosity.

Sensory impairment-defective sight, hearing, etc.
Disorders of perception-short attention span, figure-ground confusion, attention to irrelevant features.
Disorders in concept formation-lowered reasoning ability.
Language disorders-speech difficulties, extremely limited vocabulary.
Social incompetence-difficulty relating to others, lack of social amenities. (Fine, 1967)

There are, further, students who are unable to adjust to school as the normal child because they are emotionally unstabled. Such children are referred to as emotionally disturbed.

There is some discussion about the nature of the emotionally disturbed child. According to Mrs. Thomas J. Jones, State Chairman of Mental Health, New York State Congress of Parents and Teachers.

Emotional disturbance has a wide range; it may be transient and temporary, or it may be chronic. It may mean a behavior problem, one of social maladjustment or a serious mental illness. Some authorities prefer to use the term, "emotionally handicapped" as the general designation, reserving "emotionally disturbed" for the chronic and enduring problem. (Jones, 1966)

In a study conducted in California, Elis M. Bower noted that the emotionally disturbed child differed from other children in the following ways:

- .He scored significantly lower on group IQ tests.
 - .He scored significantly lower on reading and arithmetic achievement tests.
 - .Other children tended to select him for hostile, inadequate or negative, rather than positive roles in class activities.
- (Baugness, 1967)

The educational process of the mentally retarded and emotionally disturbed children requires further study.

According to the periodical *Exceptional Children*, a study conducted by the chairman of the Committee for the Emotionally Disturbed Children for the National Association of State Directors and Supervisors of Special Education along with assistance from selected state supervisors revealed among other findings that there are 2,800 classrooms in the public schools, servicing 35,000 children indicating that less than 3 percent of the socially maladjusted and emotionally disturbed children were being serviced by the public schools. It was further discovered that more than 75 percent of the classrooms for the emotionally disturbed in the public school systems are in states requiring no specific requirements for teacher certification. These coupled with other findings indicated "that states and educators, in general, have been lax in servicing the emotionally disturbed child. (Adamson, 1968)

One way in which this problem may be dealt with is by providing the proper training for the teachers. Dr. William J. Goldman and Miss Ann C. May suggest:

that every teacher in every grade be given an initial understanding, clinical experience and reinforcement by trained specialists to use educational media and the educational setting as a therapeutic milieu for children who have had negative experiences in verbal, physical, and emotional adjustment.

(Goldman and May, 1967)

Some programs utilized are thought to be effective but evaluation of the project may indicate otherwise. This was reviewed by Ann Harvey, Benjamin Yep, and Donald Sellin. In their summaries of recent research literature it was stated that:

...Cain and Levine (1963), Charney (1963), Dunn (1963), Kirk (1964), and Sellin (1964), indicate inconclusive effectiveness of school experiences for the trainable mentally retarded.

(Harvey, 1966)

Harvey, Yep, and Sellin conducted a project in which they evaluated a school program for trainable mentally retarded children involved a natural relationship among educational purposes, procedures and evaluation. The specific areas of analysis were:

- a. The relationship between learner achievement and time
- b. Relationships between and among measure of learner achievement over time.

This was conducted using 34 trainable mentally retarded children over a two-year period. Data was gathered in the initial fall and concluding spring of each school year.

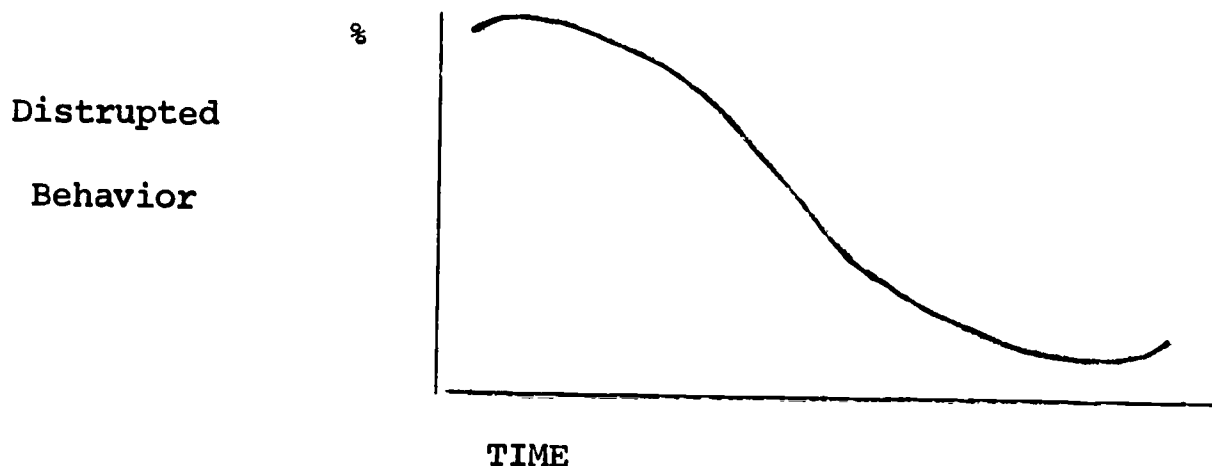
Analysis of data confirmed the effectiveness of the program. Differences between the spring of the first year and fall of the second year suggest the possible necessity for a continuous school experience during the summer months. Relationships between and among measures were reported for the four time periods of this study. Implications of those relationships were noted. (Harvey, 1966)

The education of the mentally retarded and emotionally disturbed children is a very important aspect of the realm of education and must be studied and improved more. The Philadelphia "Class for the Mentally Retarded and Emotionally Disturbed" is designed to provide specialized service to these children and to explore into the effectiveness of such specialized service.

OBJECTIVES

1. To reduce the degree of emotional disturbance exhibited by the child in the classroom environment.

H_{01} : The emotional disturbed child will demonstrate, over a period of time, a continually decreasing frequency of unorganized, chaotic and disrupted classroom behavior to the extent that graphic plotting of the frequencies will be a negatively accelerated decay curve.



2. To facilitate readiness for learning in the Emotionally disturbed and Mentally retarded as a function of meeting objective one (1).

H_{02} : Readiness for, and application to learning will be inversely proportional to the degree of reduction in emotional disturbances as demonstrated through improved speech, language usage, reading and writing, to the extent that there will be statistical ($p < .05$) significance between pre-interim and post tests.

3. To increase the degree of parental understanding of the problems of emotional disturbed and mentally retarded children to the extent that they can better manage and cope with their child's limitations.

H_{03} : The parents of the participating children, over a period of time will exhibit increasingly more understanding, tolerance and capacity to manage and cope with their children's limitations, to the degree that there will be statistical ($p < .05$) significance between pre and post questionnaire responses.

Information Required

1. Frequency of various unorganized, chaotic and disrupting behaviors.
2. A continuing measure of learning readiness as demonstrated through reading, writing, speech and language usage indices.
3. The extent to which parents become knowledgeable about mental retardation and emotional disturbances.
4. The extent to which parents learn to manage and cope with their children's limitations.
5. Any pertinent information accessible from official files.

PROCEDURES

Evaluation of the first objective will consist of a comparison of expected frequency of occurrence with the observe frequency of occurrence. This relationship will be analyzed graphically, and statistically through the use of the Chi-Square Tests, as shown.

| <u>Months</u> | 10-11 | 12-1 | 2-3 | 4-5 |
|---------------|-------|------|-----|-----|
| | 1/4 | 2/4 | 3/4 | 4/4 |

Observed

Expected

| | | | |
|--------------|--------------|--------------|--------------|
| ΣX_1 | ΣX_2 | ΣX_3 | ΣX_4 |
| ΣY_1 | ΣY_2 | ΣY_3 | ΣY_4 |

The X and Y values represent the frequency of occurrence of specified behaviors. The Chi-Square analysis will be conducted on the population of specified behavior as a whole and each behavior individually.

This data will be collected by use of a check-list. This approach will necessitate random monitoring of the classroom and some training of monitors to ensure reliability and validity of the procedure.

The second objective will be evaluated through an analysis of academic achievement. This can be accomplished through individual testing and official files of the psychologist, teachers, etc.

The sample to be studied will consist of the eight (8) students accepted in the class for emotionally disturbed and mentally retarded children. If available, a control group can be selected from the group who applied and were eligible but did not, for some reason, participate in the program.

PENNSYLVANIA ADVANCEMENT SCHOOL

Director: Peter Bittenweiser

Evaluator: Charles Howard, Jr.

Assistant: Michael N. Harris

PROBLEM

Traditional education is the problem. Specifically, developing better curricula disseminating that curricula, training better teachers, defining the role of research in improving education and most importantly, providing the required educational experience for the children. These are the problems to which the experimental facility-The Pennsylvania Advancement School is designed to address.

REVIEW OF LITERATURE

The classroom is the setting in which the education process, as exists in schools, takes place. Many classrooms are constructed to be conducive to learning; many are not. Most classroom curricula are designed for the normal or average student. The slow-learner or underachieving whose I. Q. usually is several points below the normal or average I. Q. of 100, was thrust in an uncompromising situation which resulted in two widening lags in his knowledge and that of his normal counterpart. G. Orville Johnson wrote:

...This is a prime example of a factor important to learning that is often ignored by many teachers-the factor of success. (Johnson)

He further wrote:

The success achieved makes them (slow learners) willing to put forth the continuing effort and devote the necessary time to master the mechanics.

Christine P. Ingram also wrote of the importance of success:

The element of success is of great importance in the education of the slow-learning child. (Ingram)

In the normal classroom situation, the element of success has been denied the slow learner.

The slow learner, however, does need the benefit of the classroom to learn, yet the classroom must be set up in such a way as to encourage the slow learner to learn and enable him to experience success. In achieving this, the slow learner will be motivated toward performing to his capacity.

The problem, therefore, is to make such a classroom situation possible. The Pennsylvania Advancement School is designed to experimentally explore, in addition to several other aspects of learning, the phenomenon of the classroom.

OBJECTIVES

1. To increase the PAS students' motivation to learn, as a function of increased need achievement to the extent that the mean need achievement index will rise significantly from the pretests to the post tests and over the control group.

2. To develop, among PAS students, a more positive attitude of school and learning to the extent that the mean positive attitude index will rise significantly from the pretest to the post test and over the control group.

3. To improve the PAS students' self concept to the extent that the mean self concept index will show significant gains from the pretests to the post tests and over the control group.

4. To raise the PAS students' level of aspiration as related to vocational goals to the extent that the mean level of aspiration index will show significant gains from the pretests to the post tests and over the control group.

5. To provide the PAS students the environmental stimulation conducive to developing a relaxed, accepting classroom style and to decentralize authority in the classroom to the extent that upon returning to the home school, the students' conceptualization of their role in respect to the teacher and the classroom will change significantly in the direction of a relaxed, accepting classroom style as well as decentralized authority.

6. To improve, after a minimum period of one year from date of completing a session, the PAS students' general reading and arithmetic skills to the extent that the mean Iowa scores will show significant gains from the pretest to the post test and over a control group.

7. To improve, after a minimum period of one year from date of completing a session, the PAS students' communication, decision making and abstract reasoning skills to the extent that the mean scores will show significant gains from the pretest to the post tests and over a control group.

Hypotheses

1. The PAS students will exhibit increased motivation to learn as a function of increased need to achieve to the extent that the mean need achievement index will show statistical ($p < .05$) significance from the pretest to the post test and over a control group.

2. The PAS students will exhibit a more positive attitude about school and learning to the extent that the mean positive attitude index will show statistical ($p < .05$) significance from the pretest to the post test and over a control group.

3. The PAS students will exhibit improved self concept to the extent that the mean self concept index will show statistical ($p < .05$) significance from the pretest to the post test and over a control group.

4. The PAS students will exhibit raised levels of aspiration as a function of vocational goals to the extent that the mean level of aspiration index will show statistical ($p < .05$) significance from the pretests to the post tests and over a control group.

5. The PAS students will experience environmental stimulation conducive to developing a relaxed, accepting classroom style and an attitude of decentralized authority in the classroom to the extent that upon returning to the home school, the teachers' conceptualization of their role in respect to the teacher and the classroom will change significantly ($p < .05$) in the direction of a relaxed, accepting classroom style as well as decentralized authority.

6. The PAS students will exhibit, after a minimum period of one year from date of completing a session, improved general reading and arithmetic skills to the extent that the mean scores will show statistical ($p < .05$) significance from the pretest to the post test and over a control group.

7. The PAS students will exhibit, after a minimum period of one year from date of completing a session, improved communication, decision making and abstract reasoning skills to the extent that the mean scores will show statistical ($p < .05$) significance from the pretest to the post test and over a control group.

Information Required

1. The degree to which need achievement changes over a period of time.

2. The degree to which positive attitudes toward school and learning change over a period of time.

3. The degree to which self concept changes over a period of time.

4. The degree to which level of aspiration changes over a period of time.

5. The degree to which conceptualization of role in respect to the teacher and the classroom changes over a period of time, and the degree to which students are provided the necessary environment conducive to developing a relaxed, accepting classroom style and feeling of decentralized authority.

6. The degree to which parents are involved in the PAS planned parent activities.

7. The degree to which general reading and arithmetic skills change over a period of time.

8. The degree to which communication, decision making and abstract reasoning skills change over a period of time.

PROCEDURES

In order to evaluate this project it is necessary to employ a three phase design:

Evaluation of factors expected to have an immediate effect,

Evaluation of factors expected to have an intermediate effect,

Evaluation of factors expected to have a long term effect.

Confirmation or rejection of hypotheses 1 through 4 is expected as a result of one 14 week session. It is expected that participation in one 14 week session will be sufficient to effectuate measurable change. Hypotheses 5 and 6 will be evaluated on an intermediate basis. To determine if these hypotheses have been met, it will require follow-up in the students' home school upon returning from the PAS. Hypotheses 7 and 8 will be evaluated one year from completion of a session, and is considered the long term effects.

As is probably apparent from the above discussion, the PAS is an ongoing project with 3 completed sessions each year through the 1969-70 school year. Therefore it is possible to select control groups from students who have been selected to take the course and are waiting to attend; and to do a follow-up on those students who have completed the course and have returned to their home school.

Population

The complete class, approximate 200 students, of which approximately 20 are private school students and 180 are public school students will be employed in this evaluation.

Design

Hypotheses 1 through 4 will be tested as shown in figure 1.

Figure 1

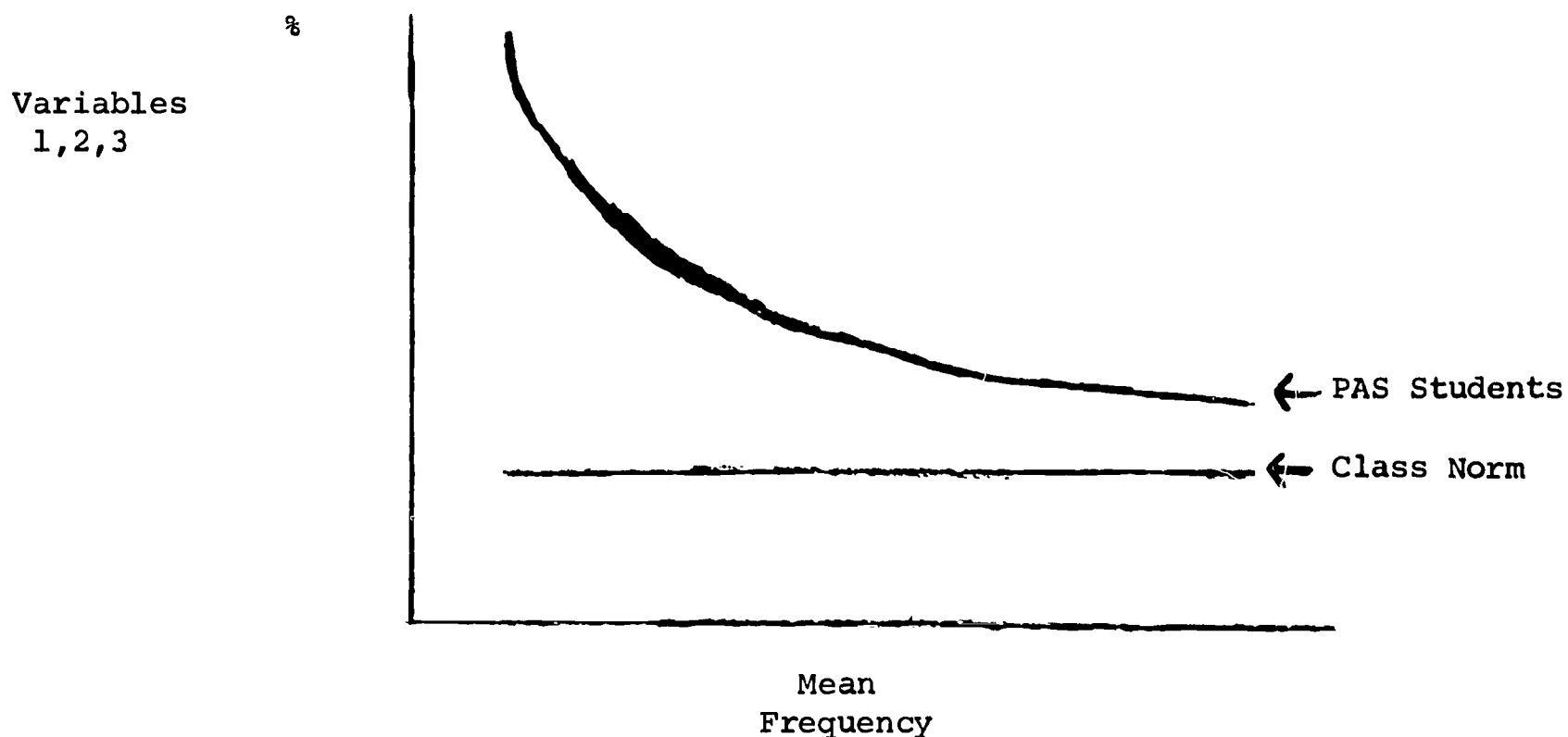
| | | Control Group Post Tests Fall 1968 | Experimental Group | |
|---------|------|---|--------------------------|---------------------------|
| | | | Pre Tests Spring 1969 | Post Tests Spring 1969 |
| 7 Grade | Boys | 1 need achieve 2 Positive Att. 3 Self-Concept 4 Vocational Aspiration | | |
| 8 Grade | Boys | 1 need achieve 2 Positive Att. 3 Self-Concept 4 Vocational Aspiration | | |

A three factor (3X2X4) of Analysis of Variance Tests will be applied to the pre and post measures as shown here.

Hypothesis 5 will be tested through a questionnaire to teachers, yielding comparative judgments in the form of frequency data. A questionnaire will be developed to assess the classroom style of the PAS students relative to their classmates. This evaluation will rely upon the teachers' knowledge of the students. These teachers will be asked to compare specified students, (PAS students) to a standard, which in this case will be the teachers' concept of the class norm, to determine if the PAS students exhibit more, less or an equal amount of the hypothesized relaxed, accepting classroom and behavior indicative of feelings of decentralized authority in the classroom.

It is hypothesized that the data distributions for the PAS students and the class norms for the stated phenomena will take the form shown in figure 2. For statistical significance, a chi-square test will be applied.

Figure 2



During the first session (Fall 1968) post tests will be administered to the students to determine the effect of the course respective to hypotheses 1, 2, 3, and 4. These measures will include indices of motivation, attitude change toward school and learning, changes in self concept and changes in aspiration levels. The post test administration will take place during the first week of January 1969.

During the second session (Spring 1969), the pretest will be administered at the beginning of the session and be compared to the post tests administered to the first session. The pretests measures will be conducted during the first or second week in February.

To evaluate hypothesis five, a follow-up of participants of the first session (Fall 1968) will be conducted in their home schools three months after the PAS experience. A sociogram will be administered; and an Interaction Analysis conducted.

During the second session, records of parental attendance and participation in the various activities offered them, as well as any action initiated by them, will be collected by the PAS officials and made available to Title I evaluators, at the end of the second session. This procedure will satisfy the design requirements necessary to evaluate hypothesis 6.

To evaluate hypothesis 7, a pre-post assessment of mean Iowa scores will be compared. Iowa scores for the spring of 1968 will be compared with Iowa scores for the Spring of 1969, using the participants in the second session, spring of 1968 session. This procedure will satisfy the design requirements necessary to evaluate the long-term achievement effect on reading and arithmetic skills, as a function of the PAS experience.

To evaluate hypothesis 8 a pre-post test design will be employed, using as subjects, the participants of the Fall 1968 session. At the end of the Fall 1968 session, pre test will be administered and again during the 1969-70 school year, or approximately one year from the pretests. Of necessity, due to the nature of the program and the requirements of the objective, hypothesis 8 cannot be completely evaluate for the final--end of the school year report in July.

MOTIVATION

Director: Rebecca Segal

Evaluator: Charles Howard, Jr.

Assistant: Michael N. Harris

PROBLEM

Motivation is a project designed to demonstrate that potentially able students can be motivated to learn and to seek additional education after high school, namely to attend or want to attend college.

The program was initiated at West Philadelphia High School. It was later expanded to include 13 other high schools, 12 of which are federally funded. This research will consider only the 12 schools receiving federal funds.

To participate in this program students must demonstrate normal or better intelligence or, in other words, the potential for greater achievement than what they have shown in their school work and on standardized tests. It is assumed that if one has the potential for growth and does not grow, the ingredient lacking is motivation.

Motivation has been defined many ways, of which Clifford T. Morgan's, "a general term referring to behavior instigated by needs and directed toward goals," serving as a generally accepted one.

Two key words in this definition are needs and goal. Needs can generally be defined as precipitating conditions necessary to initiate behavior, and goal can be defined as what is obtained or accomplished as a result of behaviors instigated by the original need.

In reference to the purpose of the motivation program and the children it will effect; it is necessary to provide the experiences and environment necessary to develop needs directed toward specified goals.

The need is a desire for academic excellence and the goal is education beyond high school.

REVIEW OF LITERATURE

Many students who live in deprived areas are "diamonds in the rough" with the same potential to do better schoolwork than they do, but due to circumstances, lack the motivation to put this potential into operation. Fred Powledge wrote that the lower class child

...brings a background almost totally different from that of the middle-class child, a background that only hinders him as he attempts to cope with the new environment, the middle-class orientation, of the school...

The lower-class child also brings with him a history of deprivation and discrimination that quite naturally limits him ability to become a contributing part of the middle-class educational experience. (Powledge, 1967)

The lower-class child's background hinders him and, thus, makes him more prone to failure and to lower aspirations than the middle-class child. In a study by Max Weiner and Marion Graves conducted in a Westchester community, when the lower socio-economic level children were asked how far they expected to go in school, 52% reported continuing their education through college and 33% through high school. Only 37% of these, however were taking college preparatory courses.

This compares to the middle class group of whom 95% intended to continue through college, and 100% were enrolled in a college preparatory course of study.

Dr. Martin Deutsh, director of the Institute for Developmental Studies, wrote the following with reference to the problem of the disadvantaged child with potential.

...The children have a great deal more capability than we assign them; that the school system continually sabotages their progress; that the total bureaucratic nature of the social organization-the American community and the American schools-acts as another source of sabotage. (Roberts, 1967)

The problem, then, is to set up an educational environment which would stimulate disadvantaged children with the potential toward greater academic achievement and aspirations. This is the goal of the program, "Motivation."

The Franklin Institute Research Laboratory, reported the results of the 1967-68 program. Their report indicated that the project was well developed and was conducted on a high level, employing a skilled staff. However, to what extent the Motivation Project participants were motivated to learn more and to seek additional education beyond high school was not discernable from the report.

Therefore, the present study must draw upon other resources for direction in planning the evaluation. One of these resources is the official file kept by schools. From these files, data on attendance, drop-out rates etc., will be collected, from which motivation can be inferred.

OBJECTIVES

- 1) To improve students' general English competence as measured by SCAT to the extent that pre- and post- tests mean scores will show statistically significant differences.
- 2) To improve students' general mathematical achievement as measured by SCAT to the extent that pre- and post- tests mean scores will show statistically significant differences.

- 3) To raise the level of aspiration toward education and college as measured by vocational aspiration to the extent that pre and post tests mean scores will show statistically significant differences.
- 4) To increase daily school attendance to the extent that those students participating in the motivation program will show statistically significant difference when compared to the school average.
- 5) To decrease the drop-out rate to the extent that those students participating in the motivation program will show statistically significant difference when compared to the school average.
- 6) To decrease college acceptance rate to the extent that those students participating in the motivation program will show statistically significant difference when compared to the school average.
- 7) To increase the probability that those accepted into college will continue and eventually graduate to the extent that those students participating in the motivation program will show statistically significant differences when compared to the school average.
- 8) To provide the program with the curriculum and cultural activities proposed.

PROCEDURES

Hypotheses

1. Motivation students' general English competence will show statistically ($p < .05$) significant mean score difference from the pretest to the post-test.
2. Motivation students' mathematical achievement will show statistically ($p < .05$) significant mean score difference from the pretest to the post-tests.
3. Motivation students' daily school attendance will be statistically ($p < .05$) higher than the matriculated school attendance rate.
4. Motivation students' drop-out rate will be ($p < .05$) significantly lower than the matriculated school drop-out rate.
5. Motivation students' college acceptance rate will statistically ($p < .05$) equal the college acceptance rate of the matriculated high school students.

6. The proportion of motivation students applying for college will show statistical ($p < .05$) significant equal the matriculated high school average.
7. The probability ($p < .05$) of graduating from college of the motivation students will equal the matriculated high schools probability of graduating from college.
8. There will be no significant ($p < .05$) difference between the proposed program curriculum and cultural activities and those applied.

Information and Instruments Required

1. SCAT General English scores (pre and post)
2. SCAT General Mathematic scores (pre and post)
3. Attendance records of motivation students and a sample of students from same school.
4. Attrition rate of motivation students and a sample of students from same school.
5. Number of motivation students applying to college and a sample of students from same school.
6. Number of motivation students applied and accepted, to college and a sample of students from same school.
7. Rate that motivation students drop out of college and the rate the sample from the same school drop out of college over time.

Experimental Procedure. The evaluation of this program will be conducted in three phases. The first phase is to determine if there are improvements in academic achievement and level of aspiration. The second phase is to assess improvement in motivation to achieve academically, by measuring daily high school attendance, high school drop-out rate, desire to attend college, acceptance into college and graduation from college. The third phase is to determine if the proposed program procedures are being applied. This phase, in addition to the above stated evaluation will assess such factors as cultural events attended, sports events, lectures, trips, etc, and the students' perceived benefits of such activities.

In view of the fact that a comparable control group may not be available, comparisons will be made drawn from past averages for the specified schools. However, comparable control groups are preferable and if at a later time, a control group can be found, it will be included in the design.

All students participating in this program will not be used, due to the large number that would be involved. Sampling procedures will be utilized. The exact percent sample will be determined later.

Target area public and private secondary school students who exhibit potential for college work will participate in the program; approximately fifty private school students will participate in the after school program. This program will involve grades 10 through 12.

Expected Number of Participants

| Public | Private |
|--------|---------|
| 4400 | 50 |

Assuming that the program will be sufficiently operational in most if not all of the schools this year, a random sample of six (6) schools will be tested and evaluated. All six selected schools will be used as a standard in determining the degree of operational progress.

The six schools randomly selected are:

1. South Philadelphia High
2. Gratz High
3. Bartram High
4. Frankford High
5. Germantown High
6. Franklin High

The statistical techniques employed will be the Sign test for assessing academic achievement in English and Mathematics. If suitable control group is available, the ANOVA will be employed. The proposed designs are shown below.

| Motivation | | |
|------------|-----------|-------------|
| Pre test | Post test | |
| English | | (Sign test) |
| Math | | |

| | Motivation | | Control | | |
|---------|------------|------|---------|------|---------|
| | Pre | Post | Pre | Post | |
| English | | | | | |
| Math | | | | | (ANOVA) |

Process reporting will be conducted via a checklist, which is being developed and will be applied, with some modification to all special growth projects.

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EDUCATION IN WORLD AFFAIRS

Director: Helen Blum

Evaluator: Charles Howard

Assistant: Michael N. Harris

SUMMARY

"Education in World Affairs" was initiated to promote knowledge and understanding of world affairs and the characteristics of various countries. Public and private school, target area children from the 7th through the 9th grades participate in the project. The program encompasses 58 schools (51-public, 7 parochial) and approximately 6,000 students. The project consists of in-school programs, combined district meetings, and trips to the United Nations.

Each year the project team selects four different countries for the students to learn about. This year's countries are Nigeria, Japan, Israel, and Italy.

PROBLEM

Providing American students, especially inner city students, experiences and pertinent knowledge of other national groups is urgent. These experiences and new knowledges must not be presented in such a fashion that students are forced into a biased comparative analysis where their cultural experiences emerge as the standard to which all other nations are measured.

Instead students must obtain knowledge about the various principles, mores and philosophies that dictate the nature of the response expectancies of the world's peoples. When such knowledge is gained it is thought that nations can better predict other nations responses to a given situation. This prediction requires a kind of understanding that necessitates "open-mindedness."

How does one, with limited resources, provide school children the knowledge and subsequent insights to cope with a shrinking world?

It is not suggested that a single project can answer all of the sub-questions implicit in such a question. However, one can attempt to demonstrate the utility of such endeavors.

REVIEW OF LITERATURE

As the distance between continents has reduced in miles and in time, knowledge of the various countries and cultures of the world has become a necessity. The Methods of teaching world affairs or social studies differs among the traditional textbook teaching and the lecture method. Neither may be the best method for teaching social studies in this modern day. Around 1960, a reform movement in the teaching of social studies began with less emphasis on the expository method and more emphasis on the inductive approach. The trend is to present the students with more stimulating mater-

ials and more challenging intellectual experiences than long lists for memorization and generalizations taken from textbooks.

Samuel Everett and Christian Arndt list three aspects of teaching and learning in junior high schools which make any type of international education difficult. Briefly stated they are:

1. Boys and girls are in the difficult early adolescent stage of development where their moods, thinking, and actions may be quite unpredictable.
 2. The expectations of parents and citizens for these youth are much different than those for younger children, thus the adolescent is expected to develop "sound ideas" (interpreted mostly by parents) on questions of foreign policy and in relation to international problems of all kinds.
 3. The climate of public opinion in a time of continuing world crises, often makes education for world affairs hard to achieve.
- (Everett and Arndt, 1956)

Evaluation of the (EWA) project was previously conducted by the Franklin Institute Research Laboratory. They stated that:

"The Education in World Affairs Project is increasing the participant's knowledge of World Affairs and seems to hold even greater potential for student involvement and the creation of interest in World Affairs. The project should be continued...at its present level but be implemented early in the school year. More visual materials should be provided as program and supplementary aids. Smaller and better controlled student groupings would reduce conflict, especially in busing and would provide more opportunity for student participation...In addition, speakers should place more emphasis on the daily life of children in other countries."

Many of the problems encountered in the project last year have been resolved this year, mainly, due to an early and effective start. One important factor to note is that two main project objectives were met.

Methodologically, the present study will add to the basic experimental design, by employing a pre and post test with a control group design to evaluate the openmindedness aspect. Feasibility of pretesting is contingent upon finding schools that have a sufficient number of class meetings on one country.

In teaching today's social studies class, teachers bring aspects of the other cultures in their classrooms in the way of class projects, speakers from other countries, stories, gifts from abroad, planning imaginary trips and other such techniques which have shown to be informative as

well as interesting. These have caused boys and girls to learn to draw value judgments which are basic to living intelligently in a world community.

Clearly, education of this nature must be encouraged. Teachers must be trained and made adequately prepared for this task. The project, "Education in World Affairs", is one designed for this purpose.

OBJECTIVES

1. To increase students general knowledge of world affairs and their specific knowledge of Nigeria, Japan, Italy and Israel to the extent that participants in the (EWA) program will exhibit statistically significant mean score gain over a control group at the end of the program.
- H₀₁: Students participating in the Education in World Affairs program will exhibit at the end of the program statistically ($p < .01$) significant mean score gains in factual knowledge about Nigeria, Japan, Italy and Israel, over a control group.
2. To develop an "openminded" attitude toward other nations and cultural groups to the extent that participants in the (EWA) program will exhibit statistically significant greater open-minded attitudes about other nations and cultural groups.
- H₀₂: Students participating in the Education in World Affairs programs will demonstrate at the end of the program statistically ($p < .01$) significant greater openminded attitudes about other nations and cultural groups than a control group.
3. To provide (EWA) students with the materials, U. N. trips and personnel necessary to implement the program, to the extent that objectives 1 and 2 can be achieved.
- H₀₃: There will be no significant ($p < .05$) statistical difference between the materials, United Nations trips and personnel proposed and that observed.
4. To provide in-service training for teachers to adequately prepare them to effectively implement the (EWA) program.
- H₀₄: There will be no significant ($p < .05$) statistical difference between the in-service training program proposed and that observed.

PROCEDURES

- Data Required
1. Factual knowledge scores on the nations studied.
 2. Openmindedness indices about other nations.
 3. The degree to which students are provided materials and personnel.
 4. The extent that United Nations trips are implemented.
 5. The extent that in-service training is implemented.

Experimental Procedures. To evaluate hypothesis one a comparative analysis between an experimental group (Education in World Affairs Participants), and a control group (Non-Education in World Affairs group) will be applied.

Factual Knowledge
OF Selected Nations
(Post-test Only)

| Experimental Group | Control Group |
|--------------------|---------------|
| X | Y |
| X | Y |
| . | . |
| . | . |
| . | . |
| X | Y |
| - | - |
| X | Y |

T Tests.

The "T" tests will be applied to the mean score values to determine if the groups differ statistically.

To evaluate hypothesis two "openmindedness", a χ^2 tests of significance will be applied, comparing the pre and post test "openmindedness" of the experimental group, with the control group.

Hypothesis three will be tested through the process evaluation. Through monitoring, data will be collected on the operation of the various proposed aspects of the program. These data will be in the form of either, it exist and is being implemented or it does not exist.

Hypothesis four will be tested through a teacher questionnaire.

Sample. A 20% sample will be selected randomly from the expected 6,000 public school students and the expected private school students. This group of approximate 3,000 students will constitute the experimental group. The control will be randomly selected from a comparable population of 7-9 ninth graders not exposed to the Education in World Affairs program.

More than 50 schools are participating in this program. A random sample class will be selected and assigned to the experimental and control group. All students in a class will be used in the sample but not all classes.

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SPECIAL SERVICES FOR CHILDREN BUSED FROM TARGET TO NON-TARGET SCHOOLS

Director: Mrs. Helen W. Suttie

Evaluator: Charles Howard, Jr.

Assistant: Michael Harris

PROBLEM

Providing transportation to children for school has always been an important aspect of education, perhaps as long as there have been schools. Pioneer children often walked or rode horses several miles in inclement weather in pursuit of an education. As cities grew and as the population increased the importance of transportation increased. Pupil transportation grew in response to the need to develop in sparsely populated areas, educational centers with enough pupils to make it possible to meet the increasingly complex demands of the schools. As educational demands became more complex, school service areas had to increase in size and the need for transportation became greater.

Not only is transportation vital to enable the children to attend schools, but also to ease the situation in overcrowded schools by transporting students who would normally go to neighborhood schools.

The problem of overcrowding is always a serious one. Such a condition greatly minimizes the important teacher-student relationship especially with regard to the need many students have for increased individual assistance from the teacher.

With Federal support to many schools, many services have become available to the students. Although transporting students from overcrowded schools with these services eases the load on the faculties and staffs of the schools, the students transported, no longer have available the services originally offered them.

The problem then is to enable the students to be transported from overcrowded schools and still make available to them the services at the schools from which they are bused. The aim of the program "Special Services For Children Bused From Target to Non-Target Schools" is to ease this problem.

REVIEW OF LITERATURE

Transportation for students was first utilized primarily to afford students who lived a great distance from the nearest school a means of getting to school. The expenditure of public funds for the transportation of pupils was first legalized by Massachusetts in 1869. (Encyclopedia of Ed. Research)

The dimensions of student transportation has changed over the years.

... One of the major functions of the school of today is to provide the child with a range of experiences broad enough to meet the problems he is certain to face.... Schools interested in helping to extend the experience background essential for effective living must continually strive to affect modifications in the curriculum that are compatible with the changes in society.

Improved and expanded means of travel and communication have extended the range of personal and group contacts...
(Pupil Transportation)

It has been further stated that:

... Student transportation has not been developed merely as a convenience to children living beyond a reasonable walking distance from school; it is essential to and an integral part of any philosophy which holds that all children should have access to adequate and appropriate educational opportunities.

Student transportation has made educational opportunities available for large numbers of children who might otherwise have been deprived of them.
(Encyclopedia of Ed. Research)

Thus, transportation broadens and enhances the school and education experience and not merely to ease an overcrowded situation.

OBJECTIVES

Hypotheses

1. To improve classroom performance in reading to the extent that participants in the program will exhibit statistically significant mean score gain over a control group in basic reading skills at the end of the program.
- H_{01} : Students participating in the Special Services for Children Bused from Target to Non-Target Schools Program will exhibit at the end of the program statistically ($p < .05$) significant mean score gains in basic reading skills over a control group.
2. To improve classroom performance in arithmetic to the extent that participants in the program will exhibit statistically significant mean score gain in basic arithmetic skills over a control group.
- H_{02} : Students participating in the Special Services for Children Bused from Target to Non-Target Schools Program will exhibit at the end of the program statistically ($p < .05$) significant mean score gains in basic arithmetic skills over a control group.
3. To provide cultural enrichment activities to the extent that participants in the program will experience inter-cultural integration with students from other residential localities in the society.

H_{03} : Students participating in the Special Services for Children Bused from Target to Non-Target Schools Program will exhibit statistically ($p < .05$) significant inter-cultural cohesiveness over a control group.

Experimental Procedure. An experimental group and 2 control groups will be used in the analysis. The experimental group will consist of pupils participating in the Special Services for Children Bused from Target to Non-Target Area Schools project. These children will experience being bused as well as a new environment in the host school. Control group No. 1 will consist of comparable pupils in the sending schools who are not bused. Control group No. II will consist of pupils in the host schools who attend classes with the bused pupils.

SPECIAL SERVICES FOR CHILDREN BUSED FROM
TARGET TO NON-TARGET SCHOOLS

DESIGN

| | EXPERIMENTAL GROUP (Students) Bused | CONTROL GROUP I (Non-Bused Students in Sending School) | CONTROL GROUP II (Students in Host Schools) |
|---|--|--|--|
| PRE-TESTS 1. Iowa (6)* 2. SAT (6) 3. Sociogram | | | |
| POST-TESTS 1. Iowa (6)* 2. SAT 3. Sociogram | | | |

A three factor Analysis of Variance design will be employed. A 3 X 2 X 6 Analysis of Variance will be performed to test the achievement hypotheses 1 and 2, on the Iowa Scores for grades 3 through 6. For grades 1 and 2, the same basic design will be applied to the SAT Scores. For the kindergarten classes, this design will be applied to the Philadelphia Readiness Scores.

*represents the 6 subtests and the composite score for the Iowa.

The number of levels on the third factor of the 3 factor design will vary as a function of the number of selected subtests for the SAT and Philadelphia Readiness Test, respectively.

The sociogram will yield frequency data, to which a chi-square test will be applied, using the pre-tests as the base line or expected frequencies. These frequencies will then be compared to the frequencies observed on the post-tests.

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WALNUT STREET CENTER

Director: Miss Frances Becker

Evaluator: Charles Howard, Jr.

Assistant: Michael Harris

PROBLEM

Education is a process which begins when a child first becomes aware of his surroundings. As his life progresses, each new age reached by the child is expected to signify not only the child's getting older, but, further, an increase in knowledge and maturity. This can be illustrated by the fact that one highly esteemed formula for the Intelligence Quotient (I.Q.) of a child is the Mental Age divided by the Chronological Age multiplied by 100. Since the mental age and chronological age are theoretically supposed to progress simultaneously, then the normal I.Q. for a normal child is considered to be 100. One of the characteristics which distinguishes the disadvantaged child from his advantaged counterpart is his score on I.Q. tests.

On general intelligence tests, disadvantaged children typically score 5 to 15 I.Q. points below average.
("Grade Teacher".)

In the educational environment, therefore, the disadvantaged child is behind the non-disadvantaged child in certain developmental aspects, thus causing his performance in school to be lower. With cognitive education being a continuous process from the day the child becomes conscious of his environment, it is important to start the "catch-up" in the educational lag as soon as possible, especially in the early formulative years in the child.

Important in the educational process of the disadvantaged child is the attitude of his parents. The Parent Teacher Associations in the various schools of this country bring the parents and teachers together for the purpose of general cooperation in the educational process of the children. Parental involvement is vital with regards to the parents of the disadvantaged children, for the problem faced by these children tend to be more acute than those faced by normal children.

Racial and social integration is a necessity for the disadvantaged child in his quest to overcome his cultural deficiency.

Much study needs to be done on the early education of the disadvantaged child, therefore, centers and schools which allow for such study must be initiated. In order for a complete and reliable study to be made, the center must be racially, socially and economically integrated.

The problem then is to provide a center or school for the education of the young disadvantaged in which parental involvement is encouraged and a center or school wherein studies may be carried out on the educational process of the young disadvantaged. The "Walnut Street Center" is such a center.

REVIEW OF LITERATURE

The early years of a child's life are very important ones for it is during this period that the child will formulate characteristics and various aspects of his personality which will remain with him throughout his life. Education is also important at this age. The pre-school experiences have come under focus as far as the benefits gained from educating the pre-school age children are concerned. "Grade Teacher" in a survey of first-grade teachers around the country found that all the teachers interviewed agreed that the right pre-school program can go a long way toward insuring a child's success in first-grade. They could not agree on just what the right program was. Some consider kindergarten a time for "play and permissiveness" while others favor the "brainy, businesslike approach."

Studies have been made on pre-school programs. Merle B. Karnes, Audrey Hodgins, and James A. Leska studied two pre-school programs for disadvantaged children. One was a traditional nursery school experience "which worked in conventional ways to improve the personal, social and motor development of the children." The experimental one "provided a highly structured program which focused on specific learning tasks chosen from school related curricula, especially tasks designed to enhance language development and cognitive skills." It was found that:

the experimental program proved to be significantly more effective in promoting intellectual functioning, language abilities, perceptual development and school readiness. (Exceptional Children)

In a study of pre-school programs in which one group participated in a nine-month program, the second in an eight week summer project, while the third had no such experience, Vera L. Pitts reported the following:

Significant differences were found among the three groups favoring the group with the longest period of pre-school attendance on several dimensions of social growth: dependability, cooperation and independence. (Childhood Education)

The pre-school years are very important in the educational process. This is particularly true in the education of the disadvantaged child. It is important to start the education of such a youngster as soon as possible, thus shortening the educational lag between him and his advantaged colleague.

OBJECTIVES

The objectives to be evaluated were substantially reduced from those originally proposed during the first year of operation. This was necessary because the program got off to a very late start. However, this year a more extensive evaluation will be conducted. The objectives to be evaluated are listed below:

1. To improve children's verbal functioning to the extent that pre and post test mean scores will show statistically significant differences on selected verbal measures.
2. To improve children's non-verbal intellectual functioning to the extent that pre and post tests mean scores will show statistically significant differences on selected non-verbal functioning tasks.
3. To improve children's self-image to the extent that pre and post tests mean scores will show statistically significant differences on selected measures of self-imagery.
4. To improve children's attention span on academic matters to the extent that pre and post tests mean scores will show statistically significant differences on selected measures of attention span.
5. To improve children's ability to develop concepts to the extent that pre and post tests mean scores will show statistically significant differences beyond what is expected due to maturation of involved modalities.
6. To reduce social isolation due to racial and linguistic differences to the extent that pre and post-questionnaire responses of teachers will show significant statistical differences.
7. To ease transitional problems from the kindergarten to first grade.
8. To increase the amount and extent of parental involvement in WSC.

Hypotheses

1. The experimental group will show statistically ($p < .05$) significant mean score verbal gains from the pretests to the post tests and over a control group.
2. The experimental group will show statistically ($p < .05$) significant mean score non-verbal gains from the pretests to the post tests and over a control group.
3. The experimental group will show statistically ($p < .05$) significant improvement in self image from the pretests to the post tests and over a control group.
4. The experimental group will show statistically ($p < .05$) significant mean score gains in attention span from the pretests and over the control group.
5. The experimental group will show statistically ($p < .05$) significant mean score gains in concept formation from the pretests to the post tests and over the control group.
6. Children in the Walnut Street Center program will show reduced social isolation over a period of time to the extent that social integration will be statistically ($p < .05$) significant from the beginning of the program to the end of program, and over a control group.
7. Children in the WSC experimental program will show statistically ($p < .05$) significant ease at transition from kindergarten to first grade, and over a control group.
8. Parents whose children participate in WSC will become increasingly involved in the center's activities.

PROCEDURES

Information Required

1. Pre and post tests verbal scores for experimental and control groups.
2. Pre and post tests non-verbal scores for experimental and control groups.
3. Pre and post measures of self image for experimental and control groups.

4. Pre and post tests attention span scores for experimental and control groups.
5. Pre and post tests concept formation scores for experimental and control groups.
6. The degree to which Walnut Street Center teachers are able to cope with the problems of teaching socially and racially integrated students.
7. The rate at which social isolation is being reduced, or the rate at which social integration is taking place.
8. The extent of problems associated with transition from the kindergarten to first grade.
9. The amount and extent of parental involvement in WSC.

Tentative Tests

| Objective to be evaluated | Selected Test(s) |
|---------------------------|---|
| 1. | Pre-School Inventory |
| 2. | Pre-School Inventory and Peabody Picture Vocabulary |
| 3. | Modified Vineland Social Maturity Scale |
| 4. | Digit span tests |
| 5. | Pre-School Inventory |
| 6. | Sociogram |
| 7. | Teacher Questionnaire |
| 8. | Parent Questionnaire |

Experimental Design

All children participating in the experimental aspects of WSC will be tested. These children fall into two socio-economic categories; the privileged and non-privileged. Operational definitions for these terms will be provided at a later date, pending a second consultation with the directors of the program. This population will comprise the experimental groups.

The control groups will consist of comparable groups, that will be selected from Trinity Nursery School, Gulph Mills, and the Drew School.

Last year's evaluators selected privilege, non-privilege, integrated, non-integrated groups as the basic design criteria. This type comparative design appears appropriate and will be utilized in this study also. Appropriate matched samples will be selected from the above mentioned school to be compared to the WSC groups.

An Analysis of Variance will be applied to the data to determine if statistical differences exist between the experimental and control groups.

| GRADE LEVELS | EXPERIMENTAL GROUP | | | | CONTROL GROUP | | | |
|------------------|---------------------|------|-------------------------|------|-------------------------|------|-----------------------------|------|
| | Privileged Mixed | | Non-Privileged Mixed | | Privileged Non-Mixed | | Non-Privileged Non-Mixed | |
| | PRE | POST | PRE | POST | PRE | POST | PRE | POST |
| | | | | | | | | |
| PRE-KINDERGARTEN | | | | | | | | |
| KINDERGARTEN | | | | | | | | |
| FIRST GRADE | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

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SPEECH ARTS TEACHERS

Director: Marjorie N. Farmer

Evaluator: Andres Steinmetz

Assistant: Oscar H. Hankinson
Barbara Rosenshine

SUMMARY

During the academic year 1967-1968 a two-phase Speech Improvement program was conducted in the Philadelphia school system. The first phase, Linguistics, was directed at transforming the students' more restricted language of "public" usage into the more standard English of "formal" usage.

The second phase of that project resembled the present Speech Arts Teachers Project in that both seek to increase students' verbal sophistication by increasing their confidence in English usage and expanding their awareness of its social role. This is to be accomplished by providing a large variety of activities which encourage extensive language usage and which explore its social functions.

The project recognizes the important role that a sense of security plays during a student's first attempts at effecting a transition to different language habits: feelings of frustration and embarrassment, leading to withdrawal, must be taken into consideration. The milieu in which the student operates must bring him into constant interaction with a model worth emulating and the Speech Arts project has been designed primarily to provide such a model.

OBJECTIVES

1. To provide models of good speech throughout the school: in assemblies, classrooms, conferences, and on film and tape.
2. To create a more positive self-concept in students as a result of greater confidence in their ability to handle the formal language.
3. To involve parents in speech related activities and to interest them in their child's language habits.

PROCEDURES

Sample. Four high schools and four junior high schools will be involved in the project. The experimental sample will consist of two of these high schools and two junior high schools. Four schools not involved in the project will serve as control schools.

Instruments, Analysis, and Hypotheses (numerals refer to the objectives above).

- 1a. Process evaluation: Tallies and classification of activities will be made in experimental and control schools.
- b. Analysis will depend on the quantity of data obtained and the kinds of categories into which the activities can be sorted.

- c. It is expected that a considerably more varied and expanded set of speech arts activities will take place in the experimental schools than in the control schools.
- 2a. A Semantic Differential was developed using concepts related to language usage facility and will be administered to 30 students from each grade level (7-12). Each experimental and control school will furnish at least one grade (N=360). Reading test scores (Iowa) will also be collected from these subjects.
- b. An overall comparison will then be made between the experimental and control groups in order to assess the significance of the Iowa scores and the Semantic Differential. The groups will also be compared when subdivided by grade level and sex (Analysis of covariance).
- c. It is hypothesized that the experimental Ss will show a significantly more positive attitude toward language related concepts on the Semantic Differential than will the control Ss.
- 3a. A questionnaire will be sent to the parents of each of the experimental and control Ss in order to assess the reading and speaking habits and interests of each child (Pre and Post). The extent to which the parents have become aware of the Speech Arts Project and its aims will be assessed by means of an additional questionnaire in May 1969.
- b. Answers to the questionnaire will be weighted and ranked.
- c. It is hypothesized that the parents of the experimental Ss will show greater concern about their children's language habits and report greater interest, on the part of their child, in language arts than will the parents of the control Ss.

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SPEECH THERAPY CLINICS

Director: E. H. Moore

Evaluator: Andres Steinmetz

Assistant: Barbara Rosenshine

PROBLEM

Children suffering from speech disorders cannot effectively take part in the school curriculum unless they receive specialized help. This project seeks to provide speech evaluation service for such private school children at the request of parents or schools. Such evaluations involve:

- a. Referral to the speech clinic nearest the child's home for immediate admission.
- b. Placement on a waiting list with counselling of parents.
- c. Counselling of parents of children for whom speech therapy is not indicated.

Training must then be provided which will develop speech and language responses in each speech-handicapped child to a point where his speech and language is equal to that of his peers.

OBJECTIVES

1. Diagnosis:

- a. Discovery of the children most in need of this service.
- b. To provide a basis for guidance of the classroom teacher and parent in the elimination of the speech problem.
- c. To provide the therapist with an analysis of the problem.

2. Therapy:

- a. To alleviate personality problems related to the speech disorder.
- b. To eliminate the speech defect.

PROCEDURES

Subjects. Children whose speech and language deviations represent, in the opinion of the classroom teacher, social, emotional or educational handicaps, will be referred by the principals of participating private schools located in target areas to the Speech Correction Office, 1801 Market Street.

Preference will be given to older and more severe cases and also to moderate to severe cases based on an organic disorder.

Instruments

1. Pre and post administration of the Templin-Darley Test of Articulation.
2. Pre and post therapy check on the severity of stuttering, using procedures developed by the School District of Philadelphia.

Analysis. Analysis of variance methodology will be used to test for the significance of pre and post mean scores.

MULTI-MEDIA CENTER

Director: Charles McLaughlin

Evaluator: Andres Steinmetz

Assistants: Barbara Rosenshine
Oscar H. Hankinson

SUMMARY

The primary aim of this project is to establish and maintain a Multi-Media Center for forty-one project schools in the Archdiocese of Philadelphia. This center will contain materials appropriate for grades one through eight and will lend them to project schools. It is to be staffed by a director (a qualified librarian) and two aides. The Multi-Media Center staff will serve as consultants, demonstrators, and advisors for all personnel in project schools.

The primary means of ascertaining service to participating schools will involve the construction of a master chart showing all transactions between the Center and project schools.

PROBLEM

Schools across the country are increasingly utilizing a growing number of instructional media in their programs. New developments in educational media afford better and more definitive methods of expository teaching, and this new technology has invaded the nation's classrooms. In fact, use of the multi-audio-visual aid approach is almost considered an essential ingredient of good teaching, not only because of its newness, but also because of its style. By encouraging greater sensory involvement it makes the material presented more meaningful.

However, many schools in the lower socio-economic neighborhoods and parishes have not shared in this mechanical proliferation. This is unfortunate because for the disadvantaged learner, who has not been exposed to many actual experiences outside of his immediate home environment, the use of audio-visual (AV) aids increases his opportunity to learn. Although it is quite difficult to compensate for the actual and continuous experiences necessary for building the language and concepts which insure successful academic performance, the use of a wide variety of media in structuring classroom lessons and experiences appears a promising alternative.

The Multi-Media Center will house a large variety of costly audio-visual aids, materials, and machinery, and will make them available to needy schools. It will be staffed by a professional librarian (Director), two aides, and a clerk, whose collective task will be the selection and distribution of machines and materials to forty-one participating schools. Instruction and demonstrations in the proper use of materials and hardware are also seen as services to be rendered by the Multi-Media Center team. Schools, teachers, and children who ordinarily would not have the use of such equipment will then have the opportunity to share in its use.

OBJECTIVES

- A. To provide enrichment in all areas of the curriculum so that learning experiences of disadvantaged children can be expanded.
- B. To provide resource material for teachers of disadvantaged children.
- C. To provide instruction in the use of various media.

PROCEDURES

A. Operational Objectives

- 1. To devise a master "Lending schedule" including all forty-one schools in the project. This schedule will also include services performed by the Center team.
 - a. Services and hardware use will be counted over a school year.
 - b. Persons in schools using the equipment will be conducted.
 - c. The number of children exposed to Center materials during the course of the school year will be counted.
 - d. An Attitudinal Survey (Semantic Differential) concerning AV materials will be made. It will involve students, teachers and Center staff.
 - e. Children will be queried about specific experiences with AV materials in an effort to determine the relative strength of their impact.

B. Design

(Note: The project is still in its developmental stages; its design is somewhat limited and will be revised.)

1. Statistical Hypotheses

$$a. H_{01} : H_{11} - H_{12} = 0$$

There is no significant difference between AV use in project schools and control schools as measured by a school survey of services and hardware in use.

$$b. H_0 : H_{21} - H_{22} = 0$$

There is no significant difference between the number of people (teachers and aides) using AV materials in project schools and control schools as measured by a school survey.

C. $H_0 : H_{31} - H_{32} = 0$
3

There is no significant difference between the number of children exposed to AV materials in experimental schools and control schools as measured by a school survey.

2. Schedule

a. Post-Post testing

b. Test Statistic: Student's t

3. Sample

a. Total number (N) = 960 children

b. Class size = 40 (approx.) children

c. Classes in
sample: 12 Experimental and 12 Control

4. Instruments

a. Master "lending schedule" which will chart the services performed by the Center. Control schools will be asked to keep similar of AV use.

b. Questionnaires and Semantic Differential.

CULTURAL EXPERIENCES

Director: Charles McLaughlin

Evaluator: Andres Steinmetz

Assistants: Oscar H. Hankinson
Barbara Rosenshine

SUMMARY

Cultural Experiences. This project is designed to compensate for cultural and informational experiences lacking in disadvantaged children. Emphasis is in three areas:

- a) Experiences (trips and activities) leading to greater language facility.
 - b) Greater awareness of and involvement in community life.
 - c) Greater parental involvement in school life of children.
- Evaluation design has not yet been agreed upon.

PROBLEM

It is clear that many children, living amidst plenty in our large urban centers, do not find access to national cultural activities and opportunities (Reisman, 1964) (Deutsch, 1964). Although they share a great wealth of activities, functions, and opportunities within their own subcultures, they remain in only superficial contact with the mainstream of society. Only recently has it been recognized that schools have been mostly attuned to the middle class way of life and have, in that sense, remained irrelevant to many children attending them.

The culturally different or "disadvantaged" youngster, although able to get along in his own subculture, has no reference points in his experiential background to help him understand or relate to new and different conceptions. Particularly debilitating is the lack of experiential background, actual or vicarious, which stresses the use of words in structuring the universe -- given that language facility is tightly bound to such background and that the building blocks or structuring materials are words. (Hathaway, 1965) The result is, for example, that a child of lower socio-economic background (of a family which is not upward-mobile) will probably not have the sort of facility with language which he needs to cope with the academic school environment. He therefore, in most cases, starts out and continues a failure.

To help the culturally different youngster expand his facility with language and to help him construct a clearer view of the universe, it is necessary to provide for him and work through with him those experiences upon which he can build. The aims of this project are to conduct such activities.

OBJECTIVES

The general objectives of the program are directed toward three general areas:

- I. Curriculum Enrichment--To provide opportunities for giving added meaning to curriculum concepts with the result that the child involved in the project will:
 - A. Demonstrate an increased ability to use these concepts in oral, written, and creative expression.
 - B. Evidence a greater degree of knowledge of the experiences offered by the various institutions that will be involved in the program and their relation to his school program.
 - C. Use these cultural resources with an increased frequency.
- II. Community Life--To increase the involvement of each child of the program in the life of the community by involving him in experiences that will:
 - A. Increase his awareness and appreciation of his role in the community.
 - B. Cause a greater degree of knowledge of the facts of Philadelphia's role in the life and history of our nation.
 - C. Involve him in the richness and variety of the cultural life of the city.
- III. Parental Involvement--To provide an opportunity to involve parents of the children in the program in cooperative planning of experiences with the result that they will become increasingly aware of the role of the school and its program as well as more knowledgeable of Philadelphia's cultural resources in the hope that this will encourage them to use these resources on their own.

PROCEDURES

This project is still in the developmental stages. Statistical hypotheses and Design are still being formulated.

There is, however, a concern on the part of project administrators to make the experiences and activities really substantive and sufficient in number to be meaningful to the children concerned.

PARENT - SCHOOL AIDES

Director: Charles McLaughlin

Evaluator: Andres Steinmetz

Assistant: Oscar H. Hankinson
Barbara Rosenshine

PROBLEM

Personalized instruction has long been considered the ideal in disseminating knowledge. From primitive societies - to Socrates - to the present, man has attempted to establish and maintain face to face relationships in imparting information.

This attempt hasn't always been successful. Urbanized man has not only added to his numbers significantly, but has increasingly alienated and isolated segments of the community from the main stream of national culture, achievement and intimate communication. (McLuhan, 1964)

At one time, as in our ancient past, man learned from his elders in a tribal society, but now with most men dependent on external agents for their knowledge, man finds himself in a predicament. Not only cannot his elders (parents) condition him for his appearance into the adult world, but the combination and sequencing of events has made it impossible for him to "Know and impart knowledge on a first-hand, face to face basis.

The institutions that have been accorded the task of training and educating the youth of today have found themselves inundated with youngsters whose life styles, past background and learning habits are not consonant nor conducive to large group instruction. (Large group instruction being the general mode of education in our large urban areas.) Unable to take advantage of the offerings of these institutions due to lack of identification with teachers, different language habits, low expectations, etc., an overwhelming percentage of students are becoming alienated and are dropping out at the earliest possible time. (Hickerson, 1966) (Reisman, 1962)

Increasingly, school administrators are searching for ways and means to alleviate this problem. Parental involvement is seen as one method in helping to restructure the milieu in which the children work. Parents with whom children can identify provide a means of improving the deteriorated self-concept of the disadvantaged learner. (Kvarceous, 1965)

In this project parents, as para-professionals, and through specialized training in phonics, will provide individualized instruction to children in target schools. Individual instruction will help meet the needs of pupils whose learning style is not correlative to group instruction.

It is evident, then, that through the use of adult residents (parent-aides) living in or near the neighborhoods of the schools concerned and having children in attendance at these schools, school systems, perhaps, have arrived at a way of getting at a problem that has become increasingly difficult and disjointed. Not only are pupils given the opportunity to learn at their own rates, (programmed instruction) but this program affords them the valuable opportunity of using the parent-aides as models (behavior and otherwise) and perhaps sounding-boards for misconceptions and pent-up frustrations in their attempts to come to grips with school problems. In this way, schools (as social systems) may return to a closer approximation of a one-to-one ratio in the teaching-learning process without impersonalizing the sensitive teacher learner relationship.

The purpose of this project then, is to raise reading scores by recruiting and utilizing neighborhood parents as tutors in a phonetic, programmed approach to this vital subject.

Related Research. "Reading is learned by individuals, Provision for individual differences in learning to read is probably more advanced than in most other curricular areas, notably in flexible grouping for instruction and in providing varied materials, Making children independent in word-attack skills, in ability to use the library, and in recreational reading continues to be the aim of all good teachers, an aim stimulated by the expanded production in recent years of easy-to-read books and the potentialities of the programmed text book." (Buswell, 1959) This point of view indicates two of the strong emphases of the Parent-Aide program; acknowledgment of individual differences and the very salient phase, programmed learning.

In establishing a personalized program the project is not only reacting to poor current reading outcomes but also to the lack of a more permanent interest in reading (Witty, 1959) (Freud, 1952), although not referring to the reading situation perse, stresses the potential interest in the interaction of "surrogate" parent and child: "The teacher ... is likely to form as close an attachment to the individual child as though it were her own." In this way, it is hoped that the parent can help the children in her charge develop a positive attitude toward reading and learning in general, and this facet of the Parent-Aide program must be counted as one of its strongest features.

In summary, Veatch (1960) postulates the following possible advantages of individualized reading instruction: high motivation produced by added attention to individual learners, removing the stigma of being in the low group, and improving individual learning rate.

OBJECTIVES

A. To increase pupil's achievement in reading by:

1. Individual and small group instruction.
2. Programmed instruction.
3. Use of phonics as instructional method.
4. Use of other media (tapes, films, slides).

B. To involve parents in schools by:

1. Recruiting and training parents to serve as aides and tutors within the school setting.
2. Increasing faculty-parent cooperation.

PROCEDURES

A. Statistical Hypotheses (on accompanying sheet)

B. Sample

1. Total project (Non-Public)

| | Experimental | Control |
|----------------------------------|--------------|---------|
| Number of Schools | 41 | 12 |
| Total Number of Pupils | 3000 | 135 |
| Number of Consultants | 3 | 0 |
| Number of Parent-Aides | 120 | 0 |
| Number of Pupils @ Group | 1000 | 0 |
| Average Number of PA A. @ School | 3 | 0 |
| Average Number of Pupils @ P. A. | 24 | 0 |

2. Sample totals (Children)

| Grades | Experimental | Control |
|--------|--------------|------------|
| 1 | 90 Pupils | 45 Pupils |
| 2 | 90 " | 45 " |
| 3 | 90 " | 45 " |
| | 270 Pupils | 135 Pupils |

C. Statistical Hypotheses

I. $H_0 : \mu_{11} \mu_{12}$

There is no significant difference ($p < .05$) between Metropolitan Readiness (or Lee Clark Reading Readiness) test & Botel Ph. In. scores of experimental group and control group, grade 1.

II. $H_0 : \mu_{21} \mu_{22}$

There is no significant difference ($p < .05$) between experimental group (grade 2) and control group (grade 2) as measured by PPS Diagnostic Reading and Botel Phonics Inventory scores.

III. $H_0 : \mu_{31} \mu_{32}$

There is no significant difference ($p < .05$) between experimental group (3rd grade) and control group (3rd grade) as measured by P.P.S. Diagnostic Reading Test, the Iowa Reading sub-test, and the Botel Phonics Inventory scores.

- IV. There is no significant difference in teacher attitude between pre and post scores as measured by a specially prepared attitude inventory. (To be devised)

3. Pupil Selection

- a) The Archdiocese of Philadelphia selected forty-one schools to participate in this project on a "need" priority. These schools have children, generally, who fulfill requirements as formulated under the ESEA, Title I.
 - b) The Control group schools and children, for the most part, are more affluent and have higher achievement scores.
4. Parent-School Aide Parents have been selected from the immediate school neighborhoods. Each parent must have a child enrolled in the school at which she will work. No educational requirements, other than general ability, have been set for the parents.
5. Consultant Selection: Consultants are religious teachers and chosen by the Archdiocese. Their primary responsibility is to train Parent-aides in phonics (pre-service course) and secondarily, to act as supervisors of P. A.'s in target schools.

Instrumentation

C. Design

| Grade | Experimental (pupils) | Control (pupils) |
|-------|---|---|
| 1 | Botel Phonics Inventory | Botel Phonics Inventory |
| 2 | PPS Diagnostic Botel Phonics Inventory | Botel Phonics Inventory |
| 3 | PPS Diagnostic Reading Iowa Reading Subtest Botel Phonics Inventory | Iowa Reading Subtest Botel Phonics Inventory |

| | EXPERIMENTAL | CONTROL |
|-------------------|--|---------|
| Parent-- Aides | 1. Questionnaire (post) Attitude Interview | None |
| Teachers | 1. Opinionnaire (pre & post) | None |

2. Test Schedule

| Grade | Pre | Post |
|-------|---|---|
| 1 | Botel Phonics | Botel Phonics |
| 2 | PPS Diagnostic Botel Phonics | PPS Diagnostic Botel Phonics |
| 3 | PPS Diagnostic Botel Phonics Iowa Reading | PPS Diagnostic Botel Phonics Iowa Reading |

| | Pre | Post |
|----------|-------------------|---------------|
| P. A. 'S | None | Questionnaire |
| Teachers | Questionnaire (?) | Questionnaire |

3. Statistical Analyses

a) Means taken for:

1. Botel Phonics Inventory
2. PPS Diagnostic Reading Test
3. Iowa Reading Sub-Test
4. Metropolitan or Lee Clark Readiness

b) I. Q. and achievement scores differences are expected between experimental and control groups. Therefore, Analysis of Covariance will be utilized to "block" and equate groups. Adjusted means will be compared for rate of achievement.

c) Teacher Attitude Inventory. (Semantic Differential) Differences between pre and post tests will be interpreted through the utilization of Chi Square Tests of Significance.

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COUNSELING SERVICES

Director: Charles McLaughlin

Evaluator: Andres Steinmetz

Assistant: Oscar H. Hankinson
Barbara Rosenshine

SUMMARY

A primary aim of this project is to identify and relieve those behavioral (social and emotional) disabilities in children that make it virtually impossible for them to learn effectively in the usual school setting. A secondary aim is to provide career and educational guidance to children and parents of forty-one non-public schools.

Professional staff comprised of qualified psychologists and thirty counselors will serve as consultants to classroom teachers.

PROBLEM

Although poverty and its concomitant ills are the base and breeding ground for much of what we call mental illness (Clark, 1965), many children who live in lower socio-economic neighborhoods and are termed "disadvantaged" by school and other social structure authorities are beset by many problems in addition to those caused primarily by poverty. While most children faced with deprivation and a world they don't understand do somehow find a means of adjusting adequately to life around them, a significant group of children is unable to do so without professional help. Perhaps the vicissitudes of poverty, scarce under-the-roof environment, and deeper biological problems are determinants in poor adjustment to school life.

Children who are emotionally "tied" experience a considerable drain on their psychological energies. This takes its toll on their mental outlook, and thus their coping behavior, so that the problems they confront seem insurmountable to them and come to grossly interfere with learning. Yet, youngsters who exhibit symptoms of emotional and social maladjustment are usually simply and only considered discipline problems by their teachers and are shunted in and out of class without real regard for their basic problems.

Teachers and children must be helped to achieve a consistent level of adjustment by professionals trained in psychological and counseling services. In as much as many parents in urban schools lack awareness of some of the problems facing their children, and financial means to deal with them, school authorities must take the initiative and devise programs and policies, not just in the identification of "problem" children, but also in methods of treating and rehabilitating them in the normal school setting. The purpose of this project, then, is to initiate a preventive program to eliminate many of the social and emotional barriers to the full educational process of the disadvantaged child.

OBJECTIVES

A. Operational objectives.

1. To identify and evaluate individual learners' disabilities caused by social or emotional factors.

2. To remediate, through consultation with professional staff and classroom teacher, problems arising in a school setting.
3. To refer students with serious deficiencies to proper offices.
4. To provide career and educational guidance.

B. Auxiliary Objectives.

1. To help school staff recognize individual psychological problems.
2. To guide parents to a deeper awareness of a child's problems.
3. To satisfy requests for treatment from parents who are already aware of a child's problems.

PROCEDURES

A. Staffing

1. Director - Psychologist
2. Thirty counselors.
3. Four Associate Psychologists to serve as consultants to the counselors and the director.

B. Design

Experimental and statistical design must await more complete implementation of this project.

FILM MEDIA CENTER FOR COMMUNICATIONS

Director: Henry E. Putsch

Evaluator: Andres Steinmetz

Assistants: Oscar H. Hankinson
Barbara Rosenshine

PROBLEM

The child in the second half of the 20th century is growing up in a world increasingly dominated by the projected image rather than by the printed word. To protect him against the barrage of visual impressions to which he is being subjected, the only positive alternative to further censorship or control is the awakening and the development of critical spirit. In other words,--"screen education." UNESCO, 1963.

In the summer of 1968, the Television Information Office estimated that, on the average, by the time a child graduates from high school he has spent about 18,200 hours in front of a television set but only about 10,200 hours in school. He may have seen 500 films but read only 50 books. It has also been estimated that a child receives up to 1,400 inputs of propaganda per day. The Carnegie Commission of Educational TV puts the problems involved this way: "The great power of television, commercial as well as non-commercial, is that it continues to educate us long after we have left the classroom. It replenishes our store of information, stimulates our perceptions, challenges our standards, and affects our judgement," clearly then, in a culture increasingly dominated by film and television, the graphic "eye" and the radio-sound "ear", basic education must include survival skills in literacy, and media competence. To live effectively in the last quarter of this century, our children need the sensory skills, critical awareness, and response-ability necessary to deal with an electronic multi-media culture.

The Film/Media Center can be described as a service organization for District II and related schools which functions as a center for staff development as well as a center for the development of materials and resources designed to facilitate an "all-media" approach to education. The basic objective of such an educational thrust is to better equip students to live effectively in a world increasingly dominated by image and other non-verbal forms of communication. This objective will be approached through the creation of a variety of programs which expand curriculum bases and methods and explicitly recognize these new all pervasive media which profoundly shape the student. The programs envisioned will stress basic communication skills in photography, graphics, cinema, television, and sound, in the belief that, for example, the teaching of reading and writing skills can gain immensely in such contexts because they reflect the extra-school experience of the child. Programs now under development include:

1. Staff-and-materials development for elementary and secondary level teachers.
2. Short and feature film study.
3. Film making and television production for children and teachers.
4. Television study. A critical awareness approach to commercial television.
5. Sound and graphics.

In all cases, the emphasis will be on such basic skills as (a) perception-- seeing and sensing, (b) awareness-- critical understanding both rational and emotional, and (c) response-- acting effectively in relation to others and the environment.

Summary of Experimental Design

| OBJECTIVES | INSTRUMENTS | SUBJECTS |
|---|---|--|
| 1. To broaden the range and depth of such perceptual skills as observation, perceptual data processing, and perceptual memory | 1.a. Torrance Test of Creativity b. Tagatz Information Processing and Concept Learning Test. (adapted) c. Concealed Figures Test (Closure Flexibility) d. Progressive Matrixes e. Cattell Culture Fair Test f. Iowa Test of Basic Skills | <p>All testing will involve experimental and control groups. If possible, pre and post experimental groups will be created randomly and will represent many different classrooms.</p> <p>A sample of 10 schools, involving all grade levels will be chosen from the schools (15 at present) reached by the center. Instruments will be selected from those listed depending upon the specific aspect of the project involved</p> |
| 2. To increase a child's ability to critically judge mass media (radio, TV, film,, photography) | 2.a. Construction of rating and measuring schemes in order to evaluate taped or written response to various media | |
| 3. To create, in the student, a more positive attitude toward his own ability and toward school | 3.a. Test of Self-Concept of Ability b. Student Questionnaire (post only) | |
| 4. To gain a better understanding of the psycholinguistics of non-print | 4.a. Status of instrumentation, techniques, and measures invented by May 1969 | |

| | | |
|---|-------------------------------|--|
| media and to explore the relationship between print and non-print media in order to systematically broaden the bases of present curricula | | |
| 5. To teach students and teachers the techniques of photography and film and TV production, to encourage creative expression in non-print media | 5.a. Exhibit of work produced | |

Hypothesis (Refers to Objective 2.)

The ability of the experimental groups to critically judge mass media will be significantly more acute than that of the control groups. The analysis will involve within and between groups comparisons using correlational and analysis of covariance techniques.

The proper formulation and testing of other hypotheses from the remaining objectives will become possible as the appropriate instrumentation is developed.

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AFFECTIVE EDUCATION RESEARCH

Directors: Norman Newberg
Terry Borton

Evaluator: Andres Steinmetz

Assistant: Oscar Hankinson

PROBLEM

"In order to help students meet the demands of drastic social change, and in order to develop an educational system which is more relevant to the basic concerns of students, educators must operate on a psychological model of man which is both accurate and useful in a school setting. (This project proposes) . . . an information processing theory of psychology as a model for building affective education courses, . . . (and seeks to outline) . . . in sequential fashion . . ., the particular processes which students need to know. Two courses . . . built on this model, one in Communications and one in Urban Affairs, . . . will use content (in their respective fields) to explicitly teach affective processes rather than using affective techniques to teach content."

In emphasizing "process" this project is interested in exploring, with students, the processes through which expression, in its broadest sense, takes place. Fundamentally, then, this project is concerned with basic cognitive and affective skills and so is involved in research on theory of instruction and human development. Put another way, this project emphasizes process and basic skills in that it is concerned with the motivation of the learner and the learning climate produced by bringing to consciousness the cognitive and affective processes that are involved in significant learning. It tries to seriously recognize (from the point of view of curriculum and instruction) that, to be meaningful, knowledge must be reconstructed or translated in terms of personal intellectual and emotional experience.

The Communications and Urban Affairs courses lend structure to the project by allowing manipulation of some problems traditionally summarized under such phrases as "Man against himself" and "Man against nature and society". They try, for example, to bring to consciousness that interpersonal behavior is a function of one's motivations and perceptions and that, if a communication is to be understood, it must find a way of including one's own experience as well as that of others. Because they are aware of the dynamic and changing nature of today's life, these courses also seek to emphasize the development of creative behavior in order to cope with such conditions: that is, they emphasize, in operational terms, the processes involved in relating both to what is within one and that which is outside of oneself.

OBJECTIVES

1. To increase students' conscious control.
 - a. over self
 - b. over their environment
 - c. over interpersonal relationships
2. To increase the students' awareness of others.

3. To develop, in students, a more positive attitude toward themselves.

One of the central aims of this project is to define the above objectives sufficiently well, within the framework of its psychological theory and theory of education, so that measuring instruments can be constructed for project evaluation. In this sense, much of the work of this project will be exploratory.

Immediate aims also include:

- a. The development of detailed lesson plans for courses in Communications and Urban Affairs.
- b. Testing and appropriate revision of lesson plans in close cooperation with the teachers involved.
- c. Extensive staff development sessions.

PROCEDURES

Subjects. Approximately 720 students are involved from nine Philadelphia high schools. Four of these have so far been chosen to provide experimental and control group subjects.

Experimental Procedure. The development of a suitable evaluation design must await the definition of criteria pertinent to the project. In order to help to define operationally the objectives, the following instrumentation has been undertaken:

1. The Philadelphia Self-Survey PSS was constructed by the Project directors and is being tried out on a pilot basis (pre and post).
2. Personal interviews will be conducted with a sample of Ss by a psychologist in order to determine long-term effects. Some in-depth interviews will also be conducted.
3. The Flint system of interaction analysis will be used (pre and post) in an attempt to categorize and to describe the classroom atmosphere in the Affective Education classrooms.
4. Other standard instruments will be adapted to the needs of the project.

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ENGLISH AS A SECOND LANGUAGE

Director: Eleanor Sandstrom

Evaluator: Andres Steinmetz

Assistant: Oscar H. Hankinson
Barbara Rosenshine

PROBLEM

The difficulties faced by students of Puerto Rican origin and background in coping with mainland curricula are considerable. Because for the most part these difficulties center around cultural differences, and because language is very much a social activity, the English as a Second Language Project (ESL) seeks to facilitate the interaction between Spanish speaking students and the English speaking community by providing, primarily, a psychologically supportive means of English language instruction for students of Spanish speaking origin. It seems likely that such learning can proceed most effectively if sufficient contact is retained with the familiar, i.e. the Spanish language.

Accordingly, this project makes available bilingual teachers who use Spanish in the classroom as a vehicle for English language instruction. Such teachers meet with students most in need of help and according to schedules worked out by the individual teachers with the administrations of the various schools served.

REVIEW OF LITERATURE

The teaching of English as a second language in the U. S. seems beset not only with the usual problems associated with teaching the English language to native speakers but, also, and most importantly, with those extra-ordinary difficulties faced by non-English speakers in coping with an English speaking environment. As far as the specifics of English language instruction in the schools are concerned the latter issue has, for example, given rise to different opinions as to the role the native speaker's language should play during the course of instruction. Various degrees of emphasis can be found between either of two extreme positions, one of these holding that the use of the native language should be minimized to the point of being made totally unavailable to the learner, and the other holding that the use of the native language should be maximized and become the primary vehicle through which English is presented.

Carroll (1963), in reviewing foreign language teaching generally, notes the popularity enjoyed by methodology which minimizes use of the native language and favors immersing a student in the foreign language by using teaching situations and materials which are easily within the experience of the learner. This is also clearly the methodology followed by the many intensive language training institutes in the U. S. and theoretical justification of such a procedure has of course been attempted. Studies of bilingualism (Politzer, 1958) apparently hold that a speaker does not normally "translate" from his native language into the second language and that native language responses thus play a small role in his ordinary speech.

Yet it seems at least illogical to conclude from this that the instructional process itself should therefore avoid all use of the native language.

Carroll (1963) also refers to a theory of bilingualism constructed by Ervin and Osgood (1954) which has also been used in justifying one or another approach to teaching a second language. Using the terminology of Ervin and Osgood, two different bilingual systems may be identified in speakers of two languages: a "coordinate" system and a "compound" system. They differ in that in the former system different referential meanings are encoded in the two languages while in the latter system the same referential meanings are encoded and the two languages are thus just two different ways of encoding. Abandoning use of the native language during instruction is said to be related to the emergence of a coordinate system in the individual while extensive use of it is held to result in a compound system. If this is so, then an instructional process would still, at least, have to find a way of deciding which of the two systems, the coordinate or the compound, is the more desirable before basing its procedures on this general language acquisition model.

Another and less explored approach to the problem involves the use of "contrastive structure analysis." This refers to the identification and prediction of particular problems given individuals will have while learning a second language as a result of the characteristics of their native language. From this point of view the role of the native language during instruction of the second language is less clear. It is more likely that further developments in structural linguistics will portray the problems of language instruction from an altogether different point of view by addressing themselves to the explication of proposed innate mechanisms involved in language learning.

There is another and different, yet equally pressing, class of problems to consider in deciding upon an instructional strategy for teaching English as a second language in the Philadelphia schools. It revolves around the need to relate a theory of instruction to processes of social-cultural adjustment and the need to distinguish between learning English as a foreign language and learning English as a second language. The ESL Project is especially interested in both of these considerations. Thus, the use of bilingual teachers by this project is not explicitly based upon any one particular model of language acquisition and utilization. Rather, it is committed to an approach which respects and seeks to strengthen cultural identity in the belief that a prerequisite for a successful outcome to any methodology, stemming from whatever theoretical orientation, is to first provide considerable psychological security to students and a clear and respectful recognition of the particular cultures involved. It holds, for example, that the psychological stress experienced by a Spanish speaking diplomat in learning English, or by Puerto Rican students learning English in Puerto Rico, is of a different order than that experienced by Puerto Rican students living in a different culture, suffering economic readjustment, exposed to social frictions, and essentially, learning English for survival.

Extending explicit recognition and respect to, in this case, the Puerto Rican culture, is simply a manifestation of a certain conception of man as a human being and of rather general values which should come into play when different peoples interact and examine each other in an open society.

In fact, not only is it well documented that cultural bias adds its own problems to questions of schools achievement and the social aspects of language (Fife and Mannel, 1951), (Carroll, 1952), (Steward, 1956), but it is also a normative requirement of a pluralistic society to respect the various communities out of which that society is constructed.

PROCEDURES

A. Subjects

Seven Parochial and 14 public schools, grades K-9, will be served by the project. The experimental sample will consist of 10 of these schools. (N=320) An attempt will be made at obtaining a control group although it will more likely be an "alternate treatment group" since it is difficult to define a group not receiving specialized English language instruction.

B. Design

| OBJECTIVES | DEPENDENT VARIABLES | INDEPENDENT VARIABLES |
|--|---|--|
| 1. To increase the level of audio-lingual proficiency in the English language | 1a. Linguistic Capacity Index (Fresno State College), November and May b. ESL Speaking Test (Developed by ESL), November and May c. ESL Student Rating Forms: monthly ratings by ESL and non-ESL teachers | 1a. Age b. Months in U. S. if island born c. Spanish language proficiency. Pre scores used will be those available (Test de Detrezas Basicas en Lectura, May 1968). All <u>Ss</u> will receive a Spanish test in May 1969. d. Number of ESL lessons e. Sex |
| 2. To develop English language usage tests which can differentiate levels of performance in those situations relevant to the students. To produce, if necessary, equivalent Spanish versions of these tests. | 2a. Status of test construction by May 1969. b. A Speaking Test will be ready for Pilot testing (November, 1968) and an "Integrative" listening-comprehension test is being constructed. | |

| OBJECTIVES | DEPENDENT VARIABLES | INDEPENDENT VARIABLES |
|---|--|-----------------------|
| 3. To involve the Puerto Rican community in the school-work of the children and in the work of the project. | 3a. Parent Questionnaire--to be developed. | |

C. Analysis

1. Operational hypothesis. There is a significant difference (p .05) between the pre and post means of the experimental group on the Linguistic Capacity Index and the ESL Speaking Test indicating an improvement in the skills of English language usage. (F test)

2. The relationship between the results provided by the ESL Student Rating Forms and the other independent variables will be examined. It is expected that the monthly rating trend will reflect the results predicted in the above hypothesis.

3. It is assumed that the scores on the dependent variables are a function of the independent variables listed. The nature of these relationships will be exhibited graphically for both the experimental and control groups and their strength will be examined by using correlational techniques.

4. The control group N will undoubtedly be smaller than the experimental group N. In that case, a random selection of appropriate Ss from the experimental group will be made in order to achieve approximately equal N. Adjusted means will be calculated for each of the dependent variables, and the experimental and control groups will then be compared on the basis of corresponding mean scores (analysis of covariance.)

5. A questionnaire addressing itself to the parents' reaction to the program as a whole will be administered in May 1969. Responses will be weighted to obtain a mean response score somewhere along a favorable vs. unfavorable rating continuum.

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HEAD START FOLLOW THROUGH

Director: Margaret Effraemson

Evaluator: Barbara Carullo

INTRODUCTION

Get Set and Head Start are based on the rationale that the disadvantaged child enters the school situation with gross cultural deficiencies. This stance is supported by an overwhelming quantity of data. Figurel (1964) found that ". . . less than half of the words in the vocabulary of pre-school children in a middle-class environment are known by 2nd grade children in slum areas." Considering this fact Bereiter (1967) advocated special kinds of teaching for the children in impoverished areas which would aide them in attaining a level of language mastery which middle class children can attain with nothing more than the informal language activities they engage in at home.

PROBLEM

Impairment of social skills and self-concept is also found in children from impoverished areas. Thompson (1962) stated. "In view of the complexity of social adjustments, it is little wonder that the majority of children's problems and maladjustments be in the social area (p. 457)" Biber (1967) in discussing the impact of deprivation on young children stated that the deprived child's way of life lacks the experiences necessary for ". . . connecting with people, being sensed as a person by others." She observed that through being known and felt and understood as a person, children's curiosity and interest that the lack of pertinent experiences necessary for the development of an adequate self-concept might be a significant contributor to the culturally deprived child's problems.

One conclusion that can be drawn from the literature is that children from impoverished areas are in great need of a specialized educational program that will provide them with the necessary tools for learning if in fact learning is to take place.

The Get Set and Head Start programs address themselves to this need and both programs have been successful in providing pre-school children with experiences that would be otherwise unavailable to them. However, because these programs benefit only pre-kindergarten children, they can at least have only a limited degree of success in the achievement of their goals. Thus, the need for a program which would carry on the good work of Get Set and Head Start in the formal school situation and at the same time help children who did not attend either Get Set or Head Start was established. Follow Through, which was begun in the Philadelphia School District in September, 1968, is an attempt to satisfy this need.

Follow Through is federally funded and has been implemented in 55 Title I kindergartens throughout Philadelphia, as well as 91 other sites in the United States. It is a four year research program directed at the early childhood years and is designed to continue for the disadvantaged child all of the benefits that Head Start and Get Set offer.

Operating within Follow Through are a number of different models of planned variation formulated by educators throughout the United States. Each model assumes a somewhat different theoretical stance as to how the benefits of Get Set and Head Start can be maximized in an early-education program. Philadelphia is somewhat unique in that it has seven of these models operating concurrently.

The components of Follow Through are common to each model: a four hour school day, hot lunches, psychological, health and social service, and smaller classes for the 1300 Follow Through children. Individualized instruction is of primary importance and is accomplished by the formation of a multi-adult classroom composed of the teacher, qualified aides, and program-parents. Through this increased interaction of the children with adults and with each other, it is hoped that the learning deficit that has existed in the school experiences of poor children will be countered and all future learning facilitated.

OBJECTIVES

The goals of Follow Through are:

- 1) To continue for the disadvantaged child the benefits of Get Set and Head Start.
- 2) To provide seven different theoretical frameworks for teacher behavior in order to maximize early childhood education.
- 3) To increase community participation and awareness in the learning process.
- 4) To increase pupil performance in the areas of reading, mathematics, and language formation.
- 5) To increase the social skills of children in deprived areas.
- 6) To increase the self-concept of children in deprived areas.

PROCEDURES

In order to evaluate the effects of this project over a four year period, the following hypotheses have been generated:

- H₁: There will be a significant difference in the kind and amount of services which are available to Follow Through children as opposed to children who have not been exposed to Follow Through.
- H₂: There will be significant differences in teacher behavior in all evaluative groupings of classrooms both Follow Through and non-Follow Through.

H₃: There will be a significant difference in the kind and amount of parental involvement for parents of Follow Through Children as opposed to parents of non-Follow Through Children.

H₄: There will be a significant difference in the achievement scores of Follow Through children after 4 years exposure to Follow Through as opposed to children who were not exposed to Follow Through.

H₅: There will be a significant difference in the amount social and self awareness of children exposed to Follow Through as opposed to children not exposed to Follow Through.

EVALUATION PLAN H₁

Subjects. There will be 10 groups of subjects, 7 experimental and 2 control. The entire population of Follow Through administrative and school personnel and a random sampling of Follow Through children and parents will comprise the seven experimental groups, each group corresponding to one of the seven experimental Follow Through models.

The entire population of administrative and school personnel and a random sampling of children and parents from 6 classes with aides will comprise the 1st control group. The entire population of school personnel and a random sampling of children and parents from 6 classes without aides will comprise the 2nd control group.

Procedure. In order to test this hypothesis, all administrative and school personnel as well as sample children and parents for all evaluation groups will be informally interviewed 4 times during the school year. Responses will be recorded on a monitoring instrument and the data from each group will be compared at the end of each year for the next 4 years. The project evaluator will conduct all interviewing and a counterbalanced technique for scheduling interviews between groups will be employed.

EVALUATION PLAN H₂

Subjects. Same as subjects for Evaluation Plan H₂.

H₂: There will be significant differences in teacher behavior in all evaluative groupings of classrooms both Follow Through and non Follow Through.

Procedure. In order to test this hypothesis, all administrative and school personnel as well as sample children and parents for all evaluations groups will be formally interviewed at the end of the school

year. The interviewers will be hand-picked and specially trained on the interviewing instrument. The instrument will be designed to ascertain degrees of parental involvement. The nature of the involvement, the degree of increase of parental involvement over other years, and the attitudes and feelings of school and community people toward parental involvement.

Responses will be recorded and the data will be compared at the end of each year for the next 4 years. This longitudinal approach can give information about attitude change over long periods of time.

EVALUATION PLAN H₃

Subjects. There will be 10 groups of subjects: 7 experimental and 3 control. Half of all teachers in each experimental Follow Through model will be randomly selected and will comprise the seven experimental groups. Six kindergarten classes with aides will be randomly selected and will comprise the first control group. Six kindergarten classes without aides will be randomly selected and will comprise the 2nd control group.

Procedure. This hypothesis will be tested by Interaction Analysis. Specially trained observers will be sent into a randomly selected sample of 41 Follow Through and non Follow Through classes in November and May and the data will be compared at the end of each year for the next 4 years. Also a log will be kept of all staff development that is planned for each of the evaluation groups. A consideration of teacher behavior in the light of Staff development can give insight into the effectiveness of the staff development planned.

EVALUATION PLAN H₄

Subjects. There will be 10 groups of subjects: 7 experimental and 3 control. The entire population of Follow Through children (1400 kindergarten students) will comprise the 7 experimental groups, each group corresponding to one of the seven experimental Follow Through models. 180 subjects obtained from 6 kindergarten classes with aides will comprise the first control group; 180 subjects obtained from 6 kindergarten classes without aides will comprise the second control group; and 100 kindergarten age children who have not attended either Get Set or Head Start and are not enrolled in kindergarten will comprise the third control group. When the children in group 3 do enroll in kindergarten they will be directed into one of the seven experimental groups or into 1 of the 2 control groups.

Procedure. In order to test this hypothesis all children in the sample will be administered the Stanford Research Institute battery of tests which include item sampling from the Metropolitan Reading Readiness, the Lee-Clark Reading Readiness, the Caldwell Pre-School Inventory, The Deutsch Unpublished Laboratory Test and the Slossam Intelligence Test. Pre-testing will be conducted in early November and these scores will serve as a pre-measure vehicle for matching children across all groups on achievement. On the basis of this battery, both experimental and control groups can be reduced to include only those children who are most similar in entrance achievement. Post measures will be made only on the matched groups. It is this group which will be watched most intensively during the next 4 years.

SRI test battery will be adjusted to fit the needs of a longitudinal study and will be administered in early October and late May for the next 4 years. The effects of summer vacation on children in different programs will be ascertained by a comparison year. It might be found that all of the good accomplished by a program during the course of a year might be negated by three months of inactivity.

The plan for data collection will involve the minimum interruption possible for classroom proceedings. Testers will be sent to each class and will be responsible for all data collection within that school. The testers will be qualified persons who are either retired school personnel or part-time personnel. All of these people will participate in a two day training session to be conducted on November 8th and November 14th. A schedule for testing and the name of the tester will be sent boxes of test equal to the number of Follow Through classes in that school. All children at a time will be tested and we are requesting that a place in the school, away from the class, be employed for this purpose. Also, it will be necessary that the aide from each class assist in the testing of the children from that class. Her role will be that of a supportive person. Since the children know the aide, her presence will tend to relax the children. She will be able to repeat directions to an individual child when necessary, make certain the children are registering responses, and encourage the children to complete the test if necessary.

Where circumstances permit, the testers will remain throughout the 4 year period and a counterbalancing technique will be employed in assigning testers to specific classes.

EVALUATION PLAN H₅ AND H₆

Subjects. Same as subjects for hypothesis 3.

Procedure. In order to test this hypothesis the Kansas Behavior Inventory will be employed because the design of this instrument fits the needs of a longitudinal study. Pre and post measurements will be made by the teacher and aide from each class, and comparisons will be made at the end of each year for 4 consecutive years.

Overview of Experimental Design

The experimental design consists of 10 treatment conditions, the seven experimental models for Follow Through and the three control groups. Each of these groups with the exception of Group X (no kindergarten or Get Set and Head Start experience) will be subdivided into two subgroups, exposure to Get Set or Head Start. Group X will receive the identical testing program as the other 9 groups even though not formally enrolled in kindergarten. When these children do enroll in first grade they will be directed into one of the seven experimental groups or into one of the two control groups. In reality this design allows for an evaluation of all presently existing early education programs in Philadelphia. Since this study is designed to measure program effects over a 4 year period, conclusions concerning the long-range effects of pre-kindergarten projects can be made. The statistical treatment of the data will supply conclusions concerning the short and long term effects of Get Set and head Start as well as indicate under what treatment conditions their effects are maximized. Most important it will evaluate the concept of the kindergarten in the light of specific programs operating in the primary grades, and it will generate information concerning what treatment condition is likely to help a child who has not attended either kindergarten or Get Set and Head Start.

Although statistical comparisons will be made on matched groups, all children in a class will be tested. This information will then be sorted on a computer so that additional information can be acquired from the mobile population. A certain portion of the original sample will stay with the school system for the entire 4 years duration of this study. Matched groups of these children will give us information about short and long range effects. New children entering these groups at any point in time will supply data for evaluating the effects of late entrance into the program. It will supply a partial answer to the question of when should a child enter a program in order for that program to be effective and how much time - exposure is necessary for a project to be effective.

A longitudinal study on a core group will answer the question of whether or not there is a point of diminishing returns in the education programs instituted for the young child.

STAFF DEVELOPMENTAL PROGRAM IN AFRICAN AND BLACK AMERICAN CULTURE

Director: Connie Clayton

Evaluator: Oscar H. Hankinson

"If it were desired to reduce a man to nothing it would be necessary only to give his worth a character of uselessness."

Fyodor Dostoesky

"The House of the Dead"

PROBLEM

What was once just an exploding awareness of their African heritage and the historical significance many members of the black race played in the development of this country is now passing into a secondary evolutionary stage for Negro educators. No longer are efforts to "prove" historical fact or document history important; these are now "fait accompli." Many authorities support the teaching of Afro-American history in the public schools not as a subsidiary or ancillary subject but as an undisputed facet enmeshed within the confines of American history.

In recent months many writers indicated the greatest need is not the establishment of curricula but a sufficient supply of teachers equipped to handle the new ideas and attitudes.

Many teachers already in-service unfortunately have not been trained historically or attitudinally, to cope with the present situation no matter what their color or present teaching circumstance. Perhaps the urge to comply with present findings is quite strong in many teachers, but they feel a deep inadequacy in their ability to define and effectively marshall their resources to this end.

With this in mind, one of the more salient aspects of the introduction of African and Afro-American history into the schools is the cognitive training and affective changing of teachers now-in-service. A series of sessions has been designed to help teachers not only learn historical fact, but to become aware of their own attitudes that will enable them to build positive relationships with their students, colleagues, and the printed media. A greater empathy and understanding of the role the African and Afro-American has played in the development of world civilization and specifically their contributions to the United States are seen as eventual and desired outcomes.

Related Research. Some phases of scholastic achievement and sense of self-worth have been postulated on the perception of involvement and participation one feels his ethnic or social group has been included in the planning and structuring of society. (Jersild, 1952) (Combs and Snygg, 1959) A sense of belonging and expected success is crucial in the development of ego strength. (Rogers, 1942, 1947, 1951, 1954, 1959, 1965) Without this positive awareness of identity or self, at a very early age, one as a rule is relegated to the shadows of failure and non-achievement.

The past decade has seen a rise in the theoretical considerations of this point. The research and writing of Brookover (1959, 1962, 1965, 1967), Patterson (1961), Diggory (1968), and Coopersmith (1967) among others have given us a deeper understanding of the dynamics of self in determining behavior.

Self-theory has become deeply entwined in the teaching of Afro-American history in the nation's schools. (Kvaraceus, 1965) As Combs and Snygg (1959) point out, the world is perceived in terms of relevance to self. If a potentially new concept (or role) of self appears to the individual to be consistent with concepts already present in the self system, it is accepted (or played) and assimilated easily. If the new concept appears to have no relationship to the system, it is usually ignored as irrelevant. If it is inconsistent, it meets with resistance and is likely to be rejected. Negro youngsters, in years past have perceived the black man's role in the United States as insignificant and external to the "accepted" social system. Being Negro was (and still) the antithesis of being a worth-while human being. Attitudes learned as infants and toddlers sharpened perceptions of the societal role black children see themselves playing as adults. All else is incompatible!

Education has been mostly irrelevant to a great number of Negro youth. It (education) is not consistent with their perceptions of themselves. The need to achieve-success in school-has always been held as an unreal quality by black youngsters reared in lower socio-economic settings. (Hickerson, 1966) (Of course, even middle-class Negro youngsters regardless of parental attempts to the contrary are negatively imbued with a sense of worthlessness.)

The teaching of history with the contributions of the black man, African and Afro-American, intact seeks to adjust and modify the negation of the Negro in America. (Bennett, 1968) By historically creating an awareness of a rich African past the substantive contributions and services to American culture by African descendents, perverted and psuedo-scientific racial "evidence" can be effectively countered. Black youngsters can develop conceptualizations that will make assimilation into main-stream America quite palatable to their self systems.

Coleman (1966) states that increasing teacher preparation will effect pupil achievement. Conflicting research does not support this view. Railsback (1965) found that there was little or no connection between teacher knowledge and pupil achievement in elementary school. Studies by Watts (1964), Washburne and Heil (1960) Bassham (1960), Moore (1965) and Snail (1959) support this view. The Soper (1956) study in New York State indicated that extra preparation by means of in-service education was as ineffective as pre-service training has been in securing pupil academic success. Metzner (Phi Delta Kappa, October 1968) indicates a lack of high correlation between teacher preparation and student achievement.

Does this mean then that in-service courses for teachers are of no value to students. Bowles and Levin (1968, summer) refute this argument. Teacher verbal ability (or perhaps vocabulary increase pertaining to a given area?) showed a significant relationship to student achievement.

How does a large urban center begin the arduous task of restructuring attitudes of the many teachers and administrators in it's system? Increased in-service courses at this juncture appear to be the only answer. A recent study (TEP, 1965) indicates that teachers will fall back on their unconscious needs unless there has been professional preparation (in-service or pre) to redefine attitudes. The same study also alludes to a need for sensitivity training for teachers. Through interaction at an emotional level (with other teachers) insight into one's own behaviors is gained. This could lead to the improvement of their professional effectiveness.

Birnbaum and Wolcott (1949) also point-up the necessity of sensitizing teachers. Laws of learning suggest that "fact-finding" by the teacher herself threatens her self-esteem less than would a comparable analysis of her behavior by a superordinate outsider.

OBJECTIVES

A. Theoretical Objectives

1. Confluence (Sensitivity) Session

- a. To increase self awareness and free expression of ideas and feelings through verbal and non-verbal interaction.
- b. To increase openness and receptivity to ideas and feelings shared by others and sometimes foreign to the participants.
- c. To increase empathy for others.
- d. To develop authentic and constructive confrontation with others on crucial and controversial social issues.
- e. To develop an increased commitment to effective use of self in one's work situation and community.

2. Regular Program

- a. To provide all pupils, staff (teachers and administrators), and community participants with the knowledge and perception which is necessary for their better understanding of the Afro-American's vital role in the past, present, and future.

- b. To set into motion the forces which will help eradicate racism in our society.
- c. To provide the educational and psychological underpinnings for Afro-Americans to assert control of their own destiny.
- d. To prepare participants for a resource pool that will be tapped for staff development programs at individual schools and at district levels.
- e. To identify interests of individual participants who may then be involved in studies of greater intensity to furnish the school system with indigenous expertise in these areas.

B. Operational Objectives

1. Sensitivity Session

- a. To inform participants of the here and now issues of the Black Revolution.
- b. To develop awareness of one's own openness to new ideas and experiences.
- c. To provide a laboratory where behavior and ideas can be tested.

2. Regular Sessions

- a. To read extensively in the areas of African and Afro-American history.
- b. To develop follow-up classroom activities, techniques and methods for immediate implementation of material learned after each staff development session with written evidence of same.
- c. To provide feedback and evaluation related to classroom implementation.
- d. To assume leadership within their own schools as resource persons in this field in various ways including:
 - 1. faculty meetings
 - 2. in-service courses
 - 3. curriculum and staff development

PROCEDURES

A. Statistical Hypotheses

1. H_{0_1} :

There is no significant ($p < .05$) difference between attitudes of teachers in experimental and control group as measured by the Behaviorial Rigidity test.

2. H_{0_2} :

There is no significant ($p < .05$) difference between history scores of students taught by teachers of experimental project and those in control group as measured by a factual history test. (to be constructed)

3. H_{0_3} :

There is no significant ($p < .05$) difference between ITBS scores of children taught by teachers enrolled in special in-service course and those children taught by teachers in control group.

4. H_{0_4} :

There is no significant ($p < .05$) difference between students in experimental and control groups as measured by a student attitudinal instrument including attitudes towards teachers, school, self and ethnic group. (to be devised)

B. Experimental Design and Tentative Time Table

| Pre-Session (2/14, 2/15, 2/16) | Sample | Experimental Control | | | |
|---|----------|----------------------|------|-----|------|
| | | Pre | Post | Pre | Post |
| 1. Teacher Attitude (Post test will be administered at end of regular session) | N-60 (0) | 2/10/69 | 5/69 | | 5/69 |
| <u>Regular Session (2/69 - 5/69)</u> | | | | | |
| 1. Factual history test teachers | 60 (0) | 2/69 | 5/69 | | 5/69 |
| 2. Factual history test-students | 350 (10) | 2/69 | 5/69 | | 5/69 |
| 3. Attitude - students | 350 (10) | 2/69 | 5/69 | | 5/69 |
| 4. Teacher Opinionnaire | 60 (0) | | 5/69 | | |
| <u>Follow-Up (7/69 - 5/70)</u> | | | | | |
| 1. Summer survey of teachers activities | 60 (0) | | 9/69 | | 9/69 |
| 2. Factual history test-students | 350 (10) | 9/69 | 5/70 | | 5/70 |
| 3. Attitude - students | 350 (10) | 9/69 | 5/70 | | 5/70 |
| 4. Iowa Test of Basic Skills | 350 (10) | 5/69 | 5/70 | | 5/70 |
| 5. Attitude - teachers | 60 (0) | | 5/70 | | 5/70 |

In the sample column the number within the parentheses is either the number of teachers or students involved.

Project will enroll 300 participants. Of these 60 (1/5) teachers will be randomly selected for experimental group. Selectees will be matched with a teacher (one-to-one) not enrolled in program but in a similar teaching situation. Second group of teachers will serve as controls. This group will be post tested only.

Statistical Techniques

1. Historical data (factual tests) pre and post means (pre test, experimental, will be used as a control variable; post-experimental and post-control compared through use of analysis of covariance.)

- a) A sub-sample of ten teachers and classes will be randomly selected from within the base group of sixty teachers for the students history test.
2. Attitudinal data for students will be compared (experimental and control) same as above.

Note: In the event no definitive or appropriate attitude questionnaires can be located, many variants of student attitude can be subsumed under one instrument. This instrument would include such factors as:

- a) attitude towards teacher
- b) attitude towards school (general)
- c) attitude towards self
- d) attitude towards ethnic group
3. Teacher attitudes will be compared through the use of analysis of covariance. (pre-post-post (control)) Pre test again will be used as control variable.
4. Iowa Test of Basic Skills (to be used only in 2nd year of project) Total battery where applicable will be analyzed by analysis of covariance.
5. Teacher Opinionnaire - Nonparametric Karamorov-Smirnov.

Non-Statistical Techniques

1. Nominal count of the number of teachers from program who have been or are being used to lead subsequent programs.
2. Nominal count of the number of programs, classroom activities, techniques and methods (innovative and learned) being used in schools by participating teachers.
3. Summer survey nominal count of teacher activities.

C. Sample

Three hundred participants from the public and non-public teaching population will be selected from teachers applying. (Teachers enrolled in a similar program in 1967-68 are not eligible.)

1. From the original 300 participants sixty (1/5) teachers will be selected randomly to serve as experimental base group. Of this number a further sub-sample of ten teachers and their classes (350 children) will be used.

2. The base group of sixty teachers will be matched with teachers not enrolled in program but who worked in a similar environment.

C. Instrumentation

1. Teacher attitude -
 - a) Test of Behavioral Rigidity (Con. Psych Press)
 - b) Style of Mind Inventory (D. Fetler)
2. Student attitude -
 - a) "How I see Myself Scale" (Gordon)
 - b) The School Inventory
 - c) Other appropriate devices to be used by evaluating staff
3. Student and teacher tests of historical (African and Afro-American) content -
 - a) Project tests from previous years (FIRL)
 - b) Other appropriate measures to be designed by project coordinator and evaluating staff.
4. Teacher opinionnaire to be designed by project coordinator and evaluating staff. For process monitoring purposes.
5. Student achievement (2nd year) Iowa Test of Basic Skills.

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